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FILE 'REGISTRY' ENTERED AT 15:31:32 ON 07 JUN 2005

L1 STRUCTURE UPLOADED

L2 6 S L1

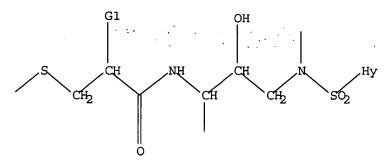
L3 136 S L1 FULL

FILE 'CAPLUS' ENTERED AT 15:32:04 ON 07 JUN 2005

L4 19 S L3

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L1 STR



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G1 C,H

Structure attributes must be viewed using STN Express query preparation.

L3 136 SEA FILE=REGISTRY SSS FUL L1

L4 19 SEA FILE=CAPLUS ABB=ON PLU=ON L3

=> d 1-19 bib abs hitstr

ANSWER 1 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN 2003:788593 CAPLUS 140:156713

DN TI Discovery of novel benzothiazolesulfonamides as potent inhibitors of HIV-1

Discovery of novel benothiazolesulfonamides as potent inhibitors of HIV-protease
Nagarajan, Srinivasan R., De Crescenzo, Gary A., Getman, Daniel P., Lu, Hwang-Pun; Sikorski, James A., Walker, Jeffrey L., McDonald, Joseph J., Houseman, Kathryn A., Kocan, Geralyn P., Kishore, Nandini, Mebta, Framod P., Punkes-Shippy, Christie L., Blystone, Lisa Pfizer Global Research and Development, Pfizer Inc., Chesterfield, MO, 63017, USA ΑU

CS

63017, USA Bioorganic & Medicinal Chemistry (2003), 11(22), 4769-4777 CODEN: BMBCEP, ISSN: 0968-0896 SO

Elsevier Ltd.

Elsevier Ltd.
Journal
English
The human immunodeficiency virus (HIV) has been shown to be the causative
agent for AIDS. The HIV virus encodes for a unique aspartyl processe that
is essential for the production of enzymes and proteins in the final stages of

maturation. Protease inhibitors have been useful in combating the disease. The inhibitors incorporate a variety of isosteres including the hydroxyethylurea at the protease cleavage site. We have shown that the replacement of t-butylures moiety by benzothiazolesulfonanide provided inhibitors with improved potency and antiviral activities. Some of the compds have shown good oral bloavailability and half-life in rats. The synthesis of benzothiazole derivs. led us to explore other heterocycles. During the course of our studies, we also developed an efficient synthesis of benzothiazole-6-sulfonic acid via a two-step procedure starting from sulfanilamide. sulfanilamide. 656236-13-4P 656236-22-5P

656236-13-48 656236-22-5p
RL: PAC (Pharmacological activity); PKT (Pharmacokinetics); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (preparation and antiviral structure-activity relationship novel benzothiazoiseulfonamides as potent inhibitors of HHV-1 protease) 656236-13-4 CAPLUS
Propanamide, N-(1%, ZR)-3-[((2-amino-6-benzothiazolyl) sulfonyl) (2-methylpropyl) amino]-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-(methylpropyl) art on (ZR)- (SCI) (CA INDEX NAME)

656236-22-5 CAPLUS
Propanamide, N-[(1S,2R)-3-[(6-benzothiazolylsulfonyl)(2-methylpropyl)anino]-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-

ANSWER 2 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN 2001:25780 CAPLUS 134:86548

Ã2

AN DN TI

134:8548
Preparation of heterocyclylcarbonyl amino acid hydroxyethylamino sulfonamide retroviral protease inhibitors
Getman, Daniel P.; De Crescenzo, Gary A.; Freskos, John N.; Vazquez,
Michael L.; Sikorski, James A.; Deyadas, Balekudru; Nagarajan, Srinivasan;
Brown, David L.; McDonald, Joseph J.
G.D. Searle and Co., USA
U.S., 85 pp., Cont.-in-part of U. S. Ser. No. 402,419, abandoned
CODEN: USXXXM
Patent

DT Patent LA English FAN.CNT 3

	PA'	TENT :	NO.			KIN	D	DATE			APPL	ICAT	ION	NO.		D.	ATE	
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PI	US	6172	101			В1		2001	0109		US 1	998-	8949	84		1	9980	423
	WO	9628	465			A1		1996	0919		WO 1	996-	US26	83		1	9960	307
		W:	AL,	AM,	AT,	AU,	AZ,	BB,	BG,	BR,	BY,	CA,	CH,	CN,	CZ,	DE,	DK,	EE,
			ES,	FI,	GB,	GE,	HU,	IS,	JP,	KE,	KG,	KP,	KR,	KZ,	LK,	LR,	LS,	LT,
			LU,	LV,	MD,	MG,	MK,	MN,	MW,	MX,	NO,	NZ,	PL,	PT,	RO,	RU,	SD,	SE,
			SG,	SI														
		RW:	ΚE,	LS,	MW,	SD,	SZ,	ŪĠ,	AT,	BE,	CH,	DE,	DK,	ES,	FI,	FR,	GB,	GR,
			ΙĔ,	IT,	LU,			PT,	SE,	BF,	ВJ,	CF,	CG,	CI,	CM,	GA		
PRAI	US	1995	-402	419		B2		1995	0310									
	wo	1996	-1152	693		U		1006	7050									

19950607

US 1995-474117 MARPAT 134:86548

Heterocyclylcarbonyl amino acids, such as I [R1 = alkyl, alkenyl, alkynyl, etc.; R2 = alkyl, arylalkyl, alkylthicalkyl, arylthicalkyl, etc.; R3 = alkyl, arylalkyl, ark = aryl, heterocryl; R10 = H, alkyl, nitrogen protecting group, etc., X = CH2, bondl, were prepared for pharmaceutical use as HIV protease inhibitors for inhibiting retroviral proteases, such as human immunodeficiency virus (HIV) protease, prophylactically preventing

ANSWER 1 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (methylsulfonyl)-, (2R)- (9CI) (CA INDEX NAME) (Continued)

Absolute stereochemistry.

RE.CNT 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

ANSWER 2 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued) retroviral infection or the spread of a retrovirus, and treatment of a retroviral infection. Thus, II was prepd. by a multistep synthetic sequence starting from N-protected-L-phenylalanine, -L-isoleucine, -L-proline, isobutylamine, and 1,3-benzodioxole. The prepd. heterocyclylcarbonyl amino acids were tested via an HIV inhibition assay. 183533-92-69

18353-92-6p
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (preparation of heterocyclylcarbonyl amino acid hydroxyethylamino sulfonamide retroviral protease inhibitors) 18353-92-6 CAPLUS Propanamide, 2-amino-N-[(1s, 2R)-3-[(1, 3-benzodioxol-5-ylsulfonyl) (2-methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl)-3-(methylsulfonyl)-, monohydrochloride, (2R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

● HC1

ANSWER 2 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)
183553-91-5 CAPLUS
Carbanic acid, ([R],-2-[[(1S,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-sethylpropyl)anino]-2-hydroxy-1-(phenylsethyl)propyl)amino]-1[[methylsulfonyl)sethyl]-2-oxoethyl]-, 1,1-dimethylethyl ester (9CI) (CA

Absolute stereochemistry.

THERE ARE 63 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT RE.CNT 63

ANSWER 3 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued) study, unclassified), SPN (Synthetic preparation), THU (Therapeutic use), BIOL (Biological study), PREP (Preparation), USES (Uses) (prepn. of sulfonylalkanoylamino hydroxyethylamino sulfonamide retroviral protease inhibitors)
174303-66-3 CAPLUS
Propanamide, N-[(15,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)amino]-2-hydroxyl-[phenylmethyl]propyl]-2-methyl-3-(methylsulfonyl)-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Absolute stereochemistry,

183004-73-1 CAPLUS
Propanamide, N={(15,2R)-3-{(6-benzothiazolylaulfonyl)(2-methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-(methylaulfonyl)-, (2S)- (9C1) (CA INDEX NAME)

Absolute stereochemistry.

183004-74-2 CAPLUS Propanamide, N-[(1S,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-

DN TI

ANSWER 3 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
2001:10084 CAPLUS
134:71903
Preparation of sulfonylelkancylamino hydroxyethylamino sulfonamide
retroviral protease inhibitors
Getnan, Daniel P., Dacrescenzo, Gary A.; Freskos, John N.; Vazquez,
Michael L.; Sikoreki, James A.; Devadas, Balekudru; Nagarajan, Srinivasan;
McDonald, Joseph J.
G.D. Searle and Co., USA
U.S., 62 pp., Cont.-in-part of U.S. Ser. No. 401,838, abandoned.
CODEN: USXXXM IN

DT LA

FAN.	CNT 4				
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6169085	B1	20010102	US 1999-411374	19991004
	US 6380188	В1	20020430	US 2000-672449	20000929
	US 2003191166	A1	20031009	US 2002-82123	20020226
	US 6667307	B2	20031223		
	US 2004147758	A1	20040729	US 2003-677729	20031003
PRAI	US 1995-401838	B2	19950310		
	WO 1996-US2682	A1	19960307		
	US 1997-913069	A1	19971219		
	US 1999-411374	A1	19991004		
	US 2000-672449	A1	20000929		
	US 2002-82123	A1	20020226		
os	MARPAT 134:71903				
GI					

Sulfonylalkancylamino hydroxysthylamino sulfonamide compds.

RSS(0) t(CH2)nCHRICONNCHR2CH(OH)CH2NR3SO2R4 (RI = H, slkyl, alkenyl, alkenyl, hydroxyslkyl, slkonyalkyl, cyanoslkyl, CH2CONH2, CH2CH2CONH2, CH2SCO2H12, CH2SO4E, CH2SO4E, CH2SO4E, CH2SO4E, CH2SO4E, R2 = alkyl, aralkyl, alkylthioslkyl, arylthioslkyl, cycloslkylskyl; RS = slkyl, cycloslkylakylskthyl; R4 = benzo-fused heteroaryl or heterocyclyl; R5 = alkyl, alkenyl, alkynyl, aryl) t = 0-2) were prepared as retroviral protesse inhibitors. Thus, N-[ZR-hydroxy-3-[(2-methylroxyl)]([(3-benzodioxol-5-yl)sulfonyl]smino]-15-(phenylsethyl)propyl]-25-methyl-3-(methylsulfonyl)propanamide was prepared and assayed for HIV protesse inhibitory activity (ICSO = 2 nh; ECSO = 20 nh). The corresponding methylsulfinyl derivative I (claimed compound) ed

cd ICSO values 2 and 7 nM and ECSO values 52 and 80 nM for the two isomers. 174303-66-3P 183004-72-0P 183004-73-1P 183004-74-2P 183004-75-3P 183004-76-6P 183004-75-5P 183004-78-69 18312-29-6P RL: BAC (Biological activity or effector, except adverse); BSU (Biological

methylpropyl) amino] -2-hydroxy-1-(phenylmethyl)propyl] -2-methyl-3-[(R)-methylsulfinyl]-, (25)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

183004-75-3 CAPLUS
Propanamide, N-[(15,2R)-3-[{(2,3-dihydro-5-benzofuranyl)sulfonyl}(2-methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl}-2-methyl-3-(methylsulfonyl}-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

193004-76-4 CAPLUS
Carbantc acid, [5-[[[(2R,35)-2-hydroxy-3-[[(25)-2-methyl-3(methylsulfonyl)-1-oxopropyl]amino]-4-phenylbutyl][2methylpropyl)amino]sulfonyl]-1H-benzimidazol-2-yl]-, methyl ester (9CI)
(CA INDEX NAME)

Absolute stereochemistry.

183004-77-5 CAPLUS
Propanamide, N-[(15,2R)-3-[((2-amino-6-benzothiazolyl)sulfonyl)(2-methylpropyl)amino|-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-(methylsulfonyl)-, (2S)- (9CI) (CA INDEX NAME)

ANSWER 3 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN

183004-78-6 CAPLUS
Propanamide, N-[(15,2R)-3-((5-benzothiazolylsulfonyl)(2-methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-(methylsulfonyl)-, (2S)- [9CI) (CA INDEX NAME)

Absolute stereochemistry.

183182-29-8 CAPLUS
Propanamide, N-{(15,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)amino|-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[(S)-methylsulfinyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

183004-99-1P 183005-01-8P

DN TI

ANSWER 4 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN 2000:821607 CAPLUS 133:536519 Synthesis of bis-amino acid hydroxyethylamino sulfonamide retroviral protease inhibitors Getman, Daniel P.; Decrescenzo, Gary A.; Freskos, John N.; Vazquez, Michael L.; Sikorski, James A.; Devadas, Balekudru; Nagarajan, Srinivasan Raj; Brown, David L.; McDonald, Joseph J. G.D. Searle and Co., USA U.S., 148 pp., Cont.-in-part of U.S. Ser. No. 402,450, abandoned. CODEN: USXXAM Patent English

APPLICATION NO. DATE

A 20001121 US 1995-479071 19950607

AA 19960919 CA 1996-2215025 19960307

WO 9628464 A1 19960919 WO 1996-US2885 19960307

WI AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, RU, IS, JF, KE, KG, KF, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, HK, MN, MW, HK, NO, NZ, FL, FT, KO, RV, SD, SE, SG, SI

RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, AU 965-5561 AU 704360 B2 19990422

BR 9607543 A 19971223 BR 1996-7543

RI AT, BE, CH, DE, DK, ES, FR, GB, GR

SI, LT, LV, FI

CN 11967322

JP 11501921

A 20001121 US 1995-479071 1995-50677

A 20001121 US 1995-479071 1995-50677

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A 20001121 US 1995-479071 1995-479071

A 20001121 US 1995-479071

A 20001121 U .. 199/1223 BR 1996-7543 19960307
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE,
SI, LT, LV, FI
CN 196732 A 19981021 CN 1996-193618 19960307
EP 1076062 A1 1996026 JP 1996-193618 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 | 19960307 SI, LT, LV, FI
PL 185108 B1 20030228 PL 1996-322163 19960307
PL 185543 B1 20030530 PL 1996-322508 19960307
PL 185543 B1 20041015 PL 1997-200 19960307
CZ 294966 B6 20050413 CZ 1997-2825 19960307
CG 294966 B6 20050413 CZ 1997-2825 19960307
US 6316496 B1 20011113 US 2000-495334 20000201
US 6316496 B1 20011113 US 2000-694783 20001024
US 2003204097 A1 20031030 US 2002-97642 20020315
US 6631210 B2 20040127
US 6851539 B1 20050301 US 2002-97642 20020315
US 6851539 B1 20050301 US 2002-97642 20020315
US 6861539 B1 20050301
US 1995-490305 B1 20950301
US 1995-49031 A 19950607
PL 1995-910337 A 19950607
US 1996-910337 A 19950607
US 1996-910337 A 19950307
US 1996-913396 A1 19980307
US 1996-913396 A1 19980307
US 2000-495334 A1 20000201
US 2000-495334 A1 20000201
US 2002-97642 COS MARPAT 1331350519

B Peptides RISHECHICONHCHRICONHCH (CH2Ph) CH (OH) CH2N (Bu-i) S02R4 (R1 = C1-5alkyl, C2-5alkynyl), A1 = aryly R13 = aralkyl, cycloalkyl, alkosyalkyl), including stereoisomers, pharmaceutically acceptable salts, 20030228 20030530 20041015 20050413 19971105 20011113 20020514 20031030 20040127 PL 1996-322163 PL 1996-352508 RE 1997-200 CZ 1997-2825 NO 1997-419 US 2000-495334 US 2000-694783 US 2002-97642

ANSWER 3 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN

183005-01-8 CAPLUS
Propanamide, N-[(18,2R)-3-([1,3-benzodioxol-5-ylsulfonyl) (2-mathylpropyl)amino]-2-bydroxy-1-(phenylmethyl)propyl]-2-methyl-3-(methylthio)-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RE.CNT 59 THERE ARE 59 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

ANSWER 4 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued) and prodrugs, were prepd. as retroviral protease inhibitors. Thus, compd. 25-[[(nethylamino)acetyl]amino]-N-[2R-hydroxy-3-[((1,3-benzodioxol-5-yl)sulfonyl](2-methylpropyl)amino]-15-(phenylmethyl)propyl)-3,3-dimethylbutanamide was prepd. and shown to be an effective HIV protease inhibitor (ICSO = 2 nM, ECSO = 18 nM).
18353-90-49 183553-91-59 183553-92-69
18353-93-79
RLL RCT (Regerant): SPN (Symbolic property)

18353-93-79
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(synthesis of bis-amino acid hydroxyethylamino sulfonamide retroviral

(synthesis of bis-amino acid hydroxyethylamino sulfonamide retrovi: protease inhibitors)

183553-90-4 CAPLUS

Carbamic acid, ((1R)-2-[[(1s,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl)amino]-1[(methylthio)methyl]-2-oxosthyl)-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

183553-91-5 CAPLUS Carbamic acid, [(1R)-2-[[(1S,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl) amino]-2-hydroxy-1-(phenylmethyl)propyl) amino]-1-[(methylsulfonyl)methyl]-2-oxoethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

183553-92-6 CAPLUS Propanamide, 2-amino-N-[{15,2R}-3-{(1,3-benzodioxol-5-ylsulfonyl)}{2-methylpropyl}amino|-2-hydroxy-1-(phenylmethyl)propyl}-3-(methylsulfonyl)-, monohydrochloride, (2R)- (9CI) (CA INDEX NAME)

IN

Patent English

L4 ANSWER 4 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

• HCl

183553-93-7 CAPLUS
Propanamide, N-[(15,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl)-2-[(chloroacetyl)amino]-3-(methylsulfonyl)-, (2R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

THERE ARE 60 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 5 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

Paptides I [R1 - alkyl, alkenyl, alkynyl, hydroxyalkyl, alkoxyalkyl, cyanoalkyl, imidazolylmethyl, CH2CONH2, CH2CONH2, CH2SO2NH2, CH2SMe, CH2S(O)He, CH2SO2NH2, CH2SSO2NH2, CH2SMe, CH2S(O)He, CH2SO2NH2, CH2SMe, CH2S(O)He, CH2SO2NH2, CH2SMe, CH2SMe, CH2SMe, CH2SMe, CH2Me, CH2M

18353-93-7P
RL: RCT (Reactant), SFN (Synthetic preparation), PREP (Preparation), RACT (Reactant or reagent)
(synthesis of bis-amino acid hydroxyethylamino sulfonamide retroviral protease inhibitors)
18355-90-4 CAPLUS
Carbamic acid, ((1R)-2-{((15,2R)-3-{(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl)amino]-1(methylthio)methyl]-2-oxoethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

ANSWER 5 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN 2000:784383 CAPLUS 133:335463

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ANSWER 5 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)
Carbamic acid, [(1R)-2-[((18,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl)amino]-1[(aethylsulfonyl)methyl]-2-oxoethyl]-, 1,1-dimethylethyl ester (9CI) (CA
INDEX NAME) Absolute stereochemistry.

18353-92-5 Carlus
Propanamide, 2-amino-N-[(15,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-mathylpropyl)amino]-2-hydroxy-1-(phenylmathyl)propyl]-3-(mathylsulfonyl)-, monohydrochloride, (2R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

• HCl

18353-93-7 CAPLUS
Propananide, N-((15,2R)-3-{(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)amino}-2-hydroxy-1-{phenylmethyl)propyl}-2-{(chloroacetyl)amino}-3-(methylsulfonyl)-, (2R)- (9CI) (CA INDEX NAME)

ANSWER 5 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

RE.CNT 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

ANSWER 6 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)
RL: BAC (Biological activity or effector, except adverse), BSU (Biological study, unclassified), RCT (Reactant), SPN (Synthetic preparation), THU (Therapeutic use), BIOL (Biological study), PREP (Preparation), RACT (Reactant or reagent), USES (Uses)
(synthesis of benzo-fused heterocyclic sulfonyl chlorides for prepn. of amino acid hydroxyethylamine sulfonamide retroviral protease inhibitors)
183812-50-2 CAPLUS
1-Pyrrolidineacetamide, N-{(1R)-2-{[(1S,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-mathylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl]amino]-1-[(nethylsulfonyl)methyl]-2-oxoethyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry

183553-89-1P 183553-90-4P 183553-91-5P 183553-92-6P 183553-93-7P

183553-92-67 183553-93-7P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(synthesis of benzo-fused heterocyclic sulfonyl chlorides for preparation of amino acid hydroxyethylamine sulfonamide retroviral protease inhibitors)

RN 183553-89-1 CAPLUS

CN 1-Pyrrolidineacetamide, N-[(1R)-2-[[(1S,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl)amino]-1-[(methylsulfonyl)methyl]-2-oxoethyl]-, monohydrochloride (9CI) (CA INDEK NAME)

Absolute stereochemistry.

• HC1

183553-90-4 CAPLUS Carbamic acid, [(1R)-2-[[(15,2R)-3-{(1,3-benzodioxol-5-ylsulfonyl)(2-

ANSWER 6 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
2000:769109 CAPLUS
133:322130
Synthesis of benzo-fused heterocyclic sulfonyl chlorides for preparation
of anino acid hydroxyethylanine sulfonamide retroviral protease inhibitors
Kunda, Sastry A.; Letendre, Leo J.; De Crescenzo, Gary A.
G.D. Searle and Co., USA
U.S., 95 pp., Cont.-in-part of U.S. 5,756,533.
CODEN: USXXXAM
Patent DN TI

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	251	B.	AT.	BR.	CH.	DE.	DK.	ES,	FR.	GR.	GB.	IT.	T.T.	tar.	Nt.	SR.	PT.	TR.
		к.		LT.			DA,	55,	r m,	u,	un,	**,	u.,	50 ,	112,	J.,	,	14,
	WO	9959						1999	1125		WO 1	999-	US70	47		11	neee	518
								AZ,										
								GB,										
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			MW,	MX,	NO,	NZ,	PL,	PŤ,	RO,	RU,	SD,	SK,	SG,	SI,	SK,	SL,	ŤJ,	TM,
			TR,	TT,	UA,	UG,	US,	UZ,	VN,	YU,	ZA,	ZW,	AH,	AZ,	BY,	KG,	KZ,	MD.
			RU,	TJ,	TH													
		RW:	GH,	GM,	KE,	LS,	MW,	SD,	SL,	SZ,	UG,	Z₩,	AT,	BE,	CH,	CY,	DE,	DK,
								ΙE,							BF,	ΒJ,	CF,	CG,
								ML,										
	ΑU	9938 6310	604			A1		1999										
	US	6310	080			B1		2001	1030		US 1	999-	4519	20		15	9991	201
	US	6310 2002 6458 2003	1113	68		A1		2002	0815		US 2	001-	8364	43 '		21	0010	418
	US	6458	785			B2		2002	1001							_		
	US	2003	2164	35		Al		2003	1120		US 2	002-	2005	89		20	0020	723
		6730						2004			-					_		
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PRAI	US	1995	-402	28 /		82		1995	0310									
	05	1995	-4/4	072		A2		1332	1000									
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		1998																
		1999																
	116	1999	-451	020				1000	1201									
	115	2001	-836	443		A1		2001	0418									
		2002				A1		2002										

US 2002-200589 AI 2001019:
US 2002-200589 AI 20020123
CASRRACT 133:3222130 MARP 20020123
CASRRACT 133:3222130 MARP 20020123
BENZO-fused heterocyclic sulfonyl halides for the preparation of amino acid bydroxyethylamine sulfonamide retroviral protease inhibitors were obtained by a process comprising reacting a benzo-fused heterocyclic compound with an SO3 complex in the presence of a water immiscible, non-reactive solvent at 0-75°, cooling, if necessary, to a temperature of from about -25° to about 65° and then adding oxalyl halide. Thus,
N-[2R-hydroxy-3-[([1,3-5-benzodioxol-5-yl]sulfonyl](2-methylpropyl)amino]-15-(phenylmethyl)propyl]-25-[(pyrrolidin-1-yl)acetylamino]-3,3-dimethylbutanamide was prepared and shown to be an effective HIV protease inhibitor (IC50 = 3 nM, EC50 = 7 nM).

ANSWER 6 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued) methylpropyl) aminoj -2-hydroxy-1-(phenylmethyl)propyl] aminoj -1- [(methylthio)methyl]-2-oxoethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

183553-91-5 CAPLUS
Carbamic acid, [(1R)-2-[[(1S,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl)amino]-1[(methylsulfonyl)methyl]-2-oxoethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry

 $\begin{array}{lll} 183553-92-6 & CAPLUS \\ Propanamide, & 2-amino-N-[\{1S,2R\}-3-[\{1,3-benzodioxol-5-ylsulfonyl\}\} (2-methylpropyl) amino]-2-bydroxy-1-\{phenylmethyl)propyl]-3-\{methylsulfonyl\}-, monohydrochloride, (2R)-(9CI)-(CA INDEX NAME) \end{array}$

ANSWER 6 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

• HCl

183553-93-7 CAPLUS
Propanamide, N-([15,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl) amino]-2-hydroxy-1-(phenylmethyl)propyl]-2[(chloroacetyl)amino]-3-(methylsulfonyl)-, (2R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

ANSWER 7 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued) fused heterocyclo sulfonyl halide intermediate, comprising reacting a benzo fused heterocyclic compd. with a -503- complex in the presence of a solvent and then adding oxalyl halide. Thus, amino acid I (R1 = CHMEET, R2 = Bm, R3 = CHZCHMES, R4 = Ph, R5-E9 = H, n = 1) was prepd. and tested as HIV protease inhibitor (ICSO = 4 mH).

183553-89-19
RIL: BAC [Biological activity or effector, except adverse); BSU (Biological study, unclassified); SFN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(benzo fused heterocyclo sulfonyl halide intermediates for the

(benzo fused heterocyclo sulfonyl halide intermediates for the preparation of amino acids as HIV protease inhibitors)

RN 183553-89-1 CAPLUS

CN 1-Pyrroildineacetamide, N-[(1R)-2-[[(1S,2R)-3-[(1,3-benzodioxol-5-yisulfonyl)(2-methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl]amino]-1-[(methylsulfonyl)methyl]-2-oxoethyl]-, monohydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.

● HC1

IT

183553-90-4P 183553-91-5P 183553-92-6P
183553-93-7P 183812-50-2P
RL: RCT (Reactant): SPN (Synthetic preparation): PREP (Preparation): RACT (Reactant or reagent)
(benzo fused heterocyclo sulfonyl helide intermediates for the

Absolute stereochemistry.

ANSWER 7 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
1999:753229 CAPLUS
132:6692
benzo fused heterocyclo sulfonyl halide intermediates for the preparation
of amino acids as HIV protease inhibitors
Kunda, Sastry A.; Letendre, Leo J.; De Crescenzo, Gary A.
G.D. Searle and Co., USA
PCT Int. Appl., 221 pp.
CODEN: PIXXD2
Patent

DT Patent English

	PAT	ENT	NO.			KIN		DATE					ION			D.	ATE	
PI	WO	9959	989					1999	1125							1	9990	518
		W:	AE,	AL,	AM,	AT,	AU,	ΑZ,	BA,	BB,	BG,	BR,	BY,	CA,	CH,	CN,	cυ,	CZ,
			DE,	DK,	EE,	ES,	FI,	GB,	GD,	GE,	GH,	GM,	HR,	HU.	ID,	IL,	IS,	JP,
								LC,										
			ΗV,	ΜX,	NO,	NZ,	PL,	PŤ,	RO,	RU,	SD,	SE,	SG,	SI,	SK,	SL,	ΤJ,	TM,
						ŲG,	US,	υz,	VN,	ΥU,	Zλ,	ZW,	AM,	λZ,	ΒY,	KG,	ΚZ,	MD,
				ΤJ,														
		RW:						SD,										
								IB,						SE,	BF,	ΒJ,	CF,	CG,
								ML,										
		6140						2000										
		9938						1999									9990	
		2002		68				2002			US 2	001-	8364	43		2	0010	418
		6458				B2		2002										
PRAI		1998				A1		1998										
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$$\mathbb{R}^{9} \xrightarrow{\mathbb{R}^{7}} \mathbb{R}^{7} \xrightarrow{\mathbb{R}^{6}} \mathbb{R}^{5} \xrightarrow{\mathbb{R}^{5}} \mathbb{R}^{1} \xrightarrow{\mathbb{R}^{2}} \mathbb{R}^{1} \xrightarrow{\mathbb{R}^{2}} \mathbb{R}^{3} \xrightarrow{\mathbb{R}^{3}} \mathbb{R}^{4}$$

Sulfonyl amino acids I (R1 = alkyl, alkenyl, alkynyl, hydroxyalkyl, alkoxyalkyl, cyanoalkyl, imidazolylmethyl, CHZCOMHZ, CHZCHZCOMHZ, CHZSME, ChZSME, ChZSOME, ChZSOZHE, CHESOME, R2 = alkyl, alkylthioalkyl, arylthioalkyl, cycloalkyl, R3 = alkyl, cycloalkyl, cycloalkyl, cycloalkyl, R3 = alkyl, cycloalkyl, cycloalkyl, R4 = substituted heterocycle, R5 = H, alkyl, hydroxyalkyl, alkoxyalkyl, alkoxyalkyl, alkoxyalkyl, alkylamide, sulfone, alkylthioalkyl, R7-8 = H, substituted heterocryl, benzo) were prepared as HIV protease inhibitors. Process for preparing a

ANSWER 7 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

183553-91-5 CAPLUS Carbamic acid, [(1R)-2-{{(1R,2R)-3-{(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl) amino}-2-hydroxy-1-(phenylmethyl)propyl) amino}-1-(methylsulfonyl)methyl]-2-oxoethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

 $\label{lem:condition} \begin{tabular}{lll} 183553-92-6 & CAPLUS & Propanamide, & 2-maino-N-[\{1S,2R\}-3-\{\{1,3-benzodioxol-5-ylsulfonyl\}\} (2-methylpropyl) amino|-2-hydroxy-1-(phenylmethyl)propyl]-3-(methylsulfonyl)-, monohydrochloride, & (2R)- & (9CI) & (CA INDEX NAME) & (9CI) &$

Absolute stereochemistry.

• HC1

183553-93-7 CAPLUS
Propenamide, N-[(15,2h)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl]-2-

ANSWER 7 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued) [(chloroacetyl)amino]-3-(methylsulfonyl)-, {2R}- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

183812-50-2 CAPLUS

1-Pyrrolidineacetamide, N-[(1R)-2-[(1S,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl)amino]-1-[(methylsulfonyl)methyl]-2-oxoethyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT RE.CNT 4

ANSWER 8 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)
methylpropyl) ((1,3-benzodioxol-5-yl)sulfonyl]amino]-1S(phenylmethyl)propyl]-2S-methyl-3-(methylsulfonyl)propanamide (1) was
prepd. and assayed for HIV protease inhibitory ectivity (IC50 - 2 nM; EC50
- 20 nM).
174303-66-3P 183004-72-0P 183004-73-1P
183004-74-2P 183004-78-6P 183182-29-8P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SFN (Synthetic preparation); THU (Therapeutic use);
BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of sulfonylalkanoylamino hydroxyethylamino sulfonamide
retroviral protease inhibitors)
174303-66-3 CAPUS
Propanamide, N-[(15, 2R)-3-[(1,3-benzodioxol-5-ylsulfonyl) (2methylpropyl) amino]-2-hydroxy-1-(phenylmethyl)propyl)-2-methyl-3(methylsulfonyl)-, (2S)- (SCI) (CA INDEX NAME)

Absolute stereochemistry.

183004-72-0 CAPLUS Propanamide, N-[(15,2R)-3-[[(2,3-dihydro-1,4-benzodioxin-6-y1)sulfonyl](2-methylpropyl)amino|-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-(methylsulfonyl)-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

183004-73-1 CAPLUS
Propanamide, N-[(15,2R)-3-[(6-benzothiazolylsulfonyl)(2-methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-(methylsulfonyl)-, (25)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

ANSWER 0 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN 1999:733035 CAPLUS 131:337352

1999;13033 CATADS
131:337352
Preparation of sulfonylalkanoylamino hydroxyethylamino sulfonamide retroviral protease inhibitors
Gettann, Daniel P.; DeCrescenzo, Gary A.; Freskos, John N.; Vazquez, Michael L.; Sikorski, James A.; Devadas, Balekudru; Nagarajan, Srinivasan; McDonald, Joseph J.
G.D. Searle and Co., USA
U.S., 59 pp., Cont.-in-part of U.S. Ser. No. 401,838, abandoned.
CODEN: USXXXAM IN

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PI	US	5985	870			λ		1999	1116		US 1	997-	9130	69		1	9971	219
	WO	9628	418			A1		1996	0919		WO 1	996-	US 26	82		1	9960	307
		¥:	λL,	AM,	ΑŤ,	ΑU,	λŻ,	BB,	BG,	BR,	ΒY,	CA,	CH,	CN,	cz,	DE,	DK,	EE,
			ES,	FI,	GB,	GE,	HU,	IS,	JP.	KE.	KG.	KP.	KR.	KZ,	LK.	LR.	LS.	LT,
			LU,	LV,	MD,	MG.	MK.	MN,	MW.	MX.	NO.	NZ.	PL.	PT.	RO.	RU.	SD.	SE,
			SG,	SI														
		RW:	KE,	LS,	MW,	SD,	SZ,	UG,	AT,	BE,	CH,	DE.	DK.	ES,	FI.	FR.	GB,	GR,
			IE,	IT,	LU.	MC.	NL.	PT.	SE.	BF.	BJ.	CF.	CG.	CI.	CH.	GA		
	US	6380	188		-	В1		2002	043Ô		US 2	000-	6724	49		2	0000	929
	US	2003	1911	66		A1		2003	1009		US 2	002-	8212	3		2	0020	226
	US	6667	307			B2		2003	1223									
	US	2004	1477	58		A1		2004	0729		US 2	003-	6777	29		2	0031	003
PRAI	US	1995	-401	88		B2		1995	0310									
	WO	1996	-US2	682		¥		1996	0307									
	US	1995	-478	625		A2		1995	0607									
	US	1997	-913	069		A1		1997	1219									
	US	1999	-411	374		A1		1999										
		2000						2000										
		2002				A1		2002										
os		RPAT			52													
GI				•														

Sulfonylalkanoylamino hydroxyethylamino sulfonamide compds. R55(0)t(CR2)ncHRICONMCHR2CH(OH)CH2NRS502R4 (R1 = H, alkyl, alkenyl, alkynyl, hydroxyalkyl, alkoxyalkyl, cyanoalkyl, CH2CONH2, CH2CH2CONH2, CH2SO2N12, CH2SMe, CH2SO2Ner, R2 = alkyl, aralkyl, alkylthioalkyl, arylthioalkyl, cycloalkylalkyl, R3 = alkyl, cycloalkyl, cycloalkylanethyl, R4 = benzo-fused heteroaryl or heterocyclylr, n, t = 0-2) were prepared as retroviral protease inhibitors. Thus, N-[2R-hydroxy-3-[(2-

L4 ANSWER 8 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

183004-74-2 CAPLUS
Propanamide, N={ [15,2R}-3-[(1,3-benzodioxol-5-ylsulfonyl) (2-methylpropyl) amino] -2-hydroxy-1-(phenylmethyl) propyl}-2-methyl-3-[(R)-methylsulfinyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

183004-78-6 CAPLUS
Propanamide, N-{[15,2R]-3-[(5-benzothiazolylsulfonyl)(2-methylpropyl)amino|-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-(methylsulfonyl)-, (25)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

183182-29-8 CAPLUS
Propanamide, N={[15,2R]-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[(S)-methylsulfinyl]-, (2S)- (9CI) (CA INDEX NAME)

ANSWER 8 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

183004-99-19 183005-01-8P

183004-99-1P 183005-01-8P
RL: RCT (Reactant): SPN (Synthetic preparation): PREP (Preparation): RACT (Reactant or reagant)
(preparation of sulfonylalkanoylamino hydroxyethylamino sulfonamide retroviral protease inhibitors)
183004-99-1 CAPLUS
Ethanethioic acid, 5-[(23)-3-[[(15,2R)-3-[(1,3-benzodioxol-5-ylaulfonyl)(2-methylpropyl)amino]-2-hydroxyl-1-(phenylmethyl)propyl]amino]-2-methylpropyl]amino]-2-methylpropyl]amino]-2-methylpropyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

183005-01-8 CAPLUS Propanamide, N-{(15,2R)-3-[(1,3-benzodioxol-5-yisulfonyl){2-methylpropyl}aminol-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-(methylthio)-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

183004-75-3P 183004-76-4P 183004-77-5P
RL: SPN (Synthetic preparation), PREP (Preparation)
(preparation of sulfonylalkanoylamino hydroxyethylamino sulfonamide

L4 ANSWER 8 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)
RE.CNT 62 HERR ARE 62 CITED REFRENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 8 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)
retroviral protease inhibitors)
RN 183004-75-3 CAPLUS
Propananide, N-{152,RN}-3-{123-dihydro-5-benzofurany1}sulfony1}{2-methylpropy1}mino|-2-hydroxy-1-(phenylmethyl)propy1]-2-methyl-3(methylsulfony1)-, (25)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

183004-76-4 CAPLUS
Carbamic acid, [5-[[(2R,3S)-2-hydroxy-3-[{(2S)-2-methyl-3-(methylsulfonyl)-1-oxopropyl]amino]-4-phenylbutyl](2-methylpropyl)amino]sulfonyl]-1H-benzimidazol-2-yl]-, methyl ester [9CI)(CA INDEX NAME)

Absolute stereochemistry.

183004-77-5 CAPLUS
Propanamide, N=[[15,2R]-3-[[(2-emino-6-benzothiazolyl)sulfonyl](2-methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-(methylsulfonyl)-, (2S)- (9CI) (CA INDEX NAME)

ANSWER 9 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN 1999:671016 CAPLUS 131:286828

131;28628
Preparation of amino acid hydroxyethylamino sulfonamides as retroviral protease inhibitors
Getman, Daniel P., Decrescenzo, Gary A., Freekos, John N., Vazquez,
Michael L., Sikorski, James A., Devadas, Balekudru, Nagarajan, Srinivasan
R., Brown, David L., McDonald, Joseph J.
G.D. Searle and Co., USA
U.S., 95 pp., Cont.-in-part of U.S. Ser. No. 402,287, abandoned.
CODEN. USXXAM IN

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		6458						2002			03 4	-1001	0301	•3		2	0010	. 10
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		1996						1996										
		1999				A3		1999	1201									
os	MAI	RPAT	131:	2868	28													
GI																		

$$\prod_{R=1}^{R_13} \bigcap_{N=1}^{R_1^2} \prod_{0}^{R_1^2} \prod_{1}^{N} \prod_{0}^{R_2} \prod_{1}^{R_2} \prod_{0}^{So_2R^4}$$

Amino acid hydroxyethylamino sulfonamide compds. I [X = CH2, CH2CH2; R1 = alkyl, alkenyl, alkynyl, hydroxy-, alkoxy-, or cyanoalkyl, inidazolylmethyl, CH2COMH2, CH2CH2COMH2, CH2SO2MH2, CH2S(0)He, CH2SO2MH2, aralkyl, alkylthioalkyl, arylthioalkyl, cycloalkylalkyl; R3 = alkyl, cycloalkyl, cycloalkyl, alkylthioalkyl, arylthioalkyl, cycloalkylalkyl, R3 = alkyl, cycloalkyl, cycloalkyl, alkyl, hydroxy- or alkoxyalkyl, R11 = H, alkyl, hydroxyalkyl, inidazolylmethyl, CH2CH2COMH2, CH2CH2SMH2, CH2CH2SMH2, inidazolylmethyl, CH2CH2COMH2, CH2CH2SMH2, CH2CH2SMH2, CH2CH2SMH2, CH2CH2SMH2, CH2CH2SMH2, CH2CH2SMH2, CH2CMH2, CH

- L4

ANSWER 9 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)
ylsulfonyl] amino]-15-(phenylmethyl)propyl]-35-methylpentanamide was prepd.
and showed ICSO = 2 nM for inhibition of HIV protease.
183551-95-19 183812-50-2P
RL: BAC (Biological activity or effector, except adverse), BSU (Biological
study, unclassified) SFN (Synthetic preparation), THU (Therapeutic use),
BIOL (Biological study); PRZP (Preparation) USES (Uses)
(preparation of amino acid hydroxyethylamino sulfonamides as retroviral
protease inhibitors)
183553-89-1 CAPLUS
1-Pyrrolidineacetamide, N-{(IR)-2-[(IS, 2R)-3-[(1,3-benzodioxol-5ylsulfonyl) (2-methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl]amino]1-((methylsulfonyl)methyl]-2-oxoethyl]-, monohydrochloride (9CI) (CA
INDEX NAME)

Absolute stereochemistry.

• HCl

183812-50-2 CAPLUS
1-Pyrrolidineacetamide, N-[(1R)-2-[[(1S,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl]amino]-1-[(methylsulfonyl)methyl]-2-oxoethyl]- (9CI) (CA INDEX NAME)

183553-90-4P 183553-91-5P 183553-92-6P
183553-93-7P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(preparation of amino acid hydroxyethylamino sulfonamides as retroviral

ANSWER 9 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

• HCl

183553-93-7 CAPLUS
Propanamide, N-[(15,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)amino]-2-hydroxy-1-(phanylmethyl)propyl]-2-[(chloroacetyl)amino]-3-(methylsulfonyl)-, (2R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT RE.CNT 2

- L4 ANSWER 9 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

 protease inhibitors)

 RN 183553-90-4 CAPLUS

 Carbanic acid, [1R]-2-[[(1S,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)amino]-2-hydroxy-1-[phenylsethyl)propyl]amino]-1[(methylthio)methyl)-2-oxoethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

183553-91-5 CAPLUS
Carbamic acid, [(1R)-2-[[(15,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl)amino]-1[(methylsulfonyl)methyl]-2-oxoethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

183553-92-6 CAPLUS
Propanamide, 2-amino-N-[{15,2R}-3-{(1,3-benzodioxol-5-ylsulfonyl) (2-methylpropyl)amino|-2-hydroxy-1-(phenylmethyl)propyl]-3-(methylsulfonyl)-,monohydrochloride, {2R}- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

ANSWER 10 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
1998:471469 CAPLUS
129:122667
Heterocyclylcarbonyl amino acid hydroxyethylamino sulfonamide retroviral
protease inhibitors
Getman, Daniel P.; DeCrescenzo, Gary A.; Freskos, John N.; Vazquez,
Michael L.; Sikorski, James A.; Devadas, Balekudru; Nagarajan, Srinivasan;
Brown, David L.; McDonald, Joseph J.
G.D. Searle and Co., USA
U.S., 75 pp., Cont.-in-part of U. S. Ser. No. 402,419, abandoned.
CODEN: USXXAM
Patent
English
CNT 3 IN

DT LA

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		TENT	MO.			KIN	-	DATE			APP	LICAL	ION	NO.		-		
PI	US	5776 2215 9628	971			A		1998	0707		US :	1995-	4741	17		1	9950	607
	CA	2215	022			AA		1996	0919		CA :	1996-	2215	022		1	9960	307
	WO	9628	465			A1		1996	0919		WO :	1996-	US26	83		1	9960	307
		W:	AL,	AM,	AT,	AU.	AZ.	BB,	BG.	BR.	BY.	CA.	CH.	CN.	CZ.	DE.	DK.	EE.
								IS,										
								MN,										
				SI														
		RV:	KE.	LS.	MW.	SD.	SZ.	UG,	AT.	BE.	CH.	DE.	DK.	ES.	FI.	FR.	GB.	GR.
			IR.	IT.	LU.	MC.	NL.	PT.	SR.	BF.	BJ	CF.	CG.	CI.	CM.	GA.		
	λU	9654	178	•		A1		1996	1002		AU	996-	5417	8		1	9960	307
	ΑU	7175	98			B2		2000	0330									
	EP	8151	24			A1		1998	0107		EP :	1996-	9112	30		1	9960	307
	EP	9654 7175 8151 8151	24			В1		2002	1204									
		R:	λī,	BE.	CH,	DE,	DK,	ES,	FR.	GB,	GR.	IT.	LI.	LU.	NL.	SE.	PT.	IE.
	CN	1183	102	•	٠	A	-	1998	0527		CN :	1996-	1936	19		1	9960	307
	JP	1150	1920			T2		1999	0216		JP :	996-	5276	47		1	9960	307
	BR	9607	625			Α		1999	0615		BR :	996-	7625			1	9960	307
	RU	2174	519			C2		2001	1010		RU :	997-	1165	23		1	9960	307
	AT	R: 1183 1150 9607 2174 2174 8151 2190 9704 5972 6063 6214 6407 2003 6673 2004 1995 1995	33			E		2002	1215		AT :	996-	9112	30		ī	9960	307
	PL	1847	71			B1		2002	1231		PL :	1996-	3221	79		1	9960	307
	PT	9151	24			Ŧ		2003	0430		PT :	996-	9112	30		1	9960	307
	ES	2190	793			T3		2003	0816		ES :	996-	9112	30		1	9960	307
	NO	9704	147			A		1997	1104		NO :	997-	4147			1	9970	909
	US	5972	989			Α		1999	1026		US :	998-	2827	2		1	9980	224
	US	6063	795			A		2000	0516		US :	999-	3077	11		1	9990	510
	US	6214	B61			B1		2001	0410		us 2	2000-	5012	65		2	0000	209
	US	6407	134			В1		2002	0618		us 2	2001-	7756	82		2	0010	205
	US	2003	1302	02		A1		2003	0710		us 2	2002-	1207	91		2	0020	412
	US	6673	822			В2		2004	0106									
	US	2004	1989:	89		A1		2004	1007		us a	2003-	7158	52		2	0031	119
MΙ	US	1995	-402	419		B2		1995	0310									
	US	1995	-392	305		B2		1995	0410									
	US	1995	-474	117		Α		1995	0607									
	WO	1996	-US2	683		¥		1996	0307									
	US	1998	-282	72		A1		1998	0224									
	US	1995 1996 1998 1999	-307	711		A1		1999	0510									
	US	2000	-501.	405		A1		2000										
	US	2001	-775	682		A1		2001										
						A1		2002	0412									
5	MAJ	TA9	129:	1228	57													
1																		

ANSWER 10 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

Heterocyclylcarbonyl amino acid hydroxyethylamino sulfonamide compds. I (X - bond or CH2; Rl - H, alkyl, alkenyl, alkynyl, imidazolylmethyl, CH2CORH2, CH2SOZHEZ, etc.; R2 - alkyl, aralkyl, alkylthioalkyl, arylthioalkyl, cycloalkyl, R3 - alkyl, cycloalkyl, cy

18353-90-46 18353-91-59
RL: RCT (Reactant): SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(heterocyclylcarbonyl amino acid hydroxyethylamino sulfonamide retroviral protease inhibitors)
18355-90-4 CaPLUS
Carbamic acid, [(1R)-2-[[(1s,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl)amino]-1[(methylthio)methyl]-2-oxoethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

183553-91-5 CAPLUS
Carbamic acid, [(1R)-2-{[(1S,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl)amino]-1[(methylsulfonyl)methyl]-2-oxoethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry

ANSWER 11 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN 1998:392091 CAPLUS 129:41411

L4 AN DN TI

Preparation of amino acid hydroxyethylamino sulfonamide retroviral

Preparation of amino acid hydroxyethylamino sulfonamide retroviral protease inhibitors Getman, Daniel P., Decrescenzo, Gary A., Freskos, John N., Vazquez, Michael L., Sikorski, James A., Devadas, Balekudru, Nagarajan, Srinivasan, Brown, David L., McDonald, Joseph J. G.D. Searle and Co., USA U.S., 93 pp., Cont.-in-part of U. S. Ser. No. 402,287, abandoned. CODEN: USXXAM

DT Patent

MARPAT 129:41411

LA English FAN.CNT 5

APPLICATION NO. DATE

A 19980526 US 1995-474052 19950607

9628463 A1 19960919 VC 1996-2215061 19960307

W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MK, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, TH, LI, LV, MD, MG, MK, MN, MW, MK, NO, NZ, PL, PT, RO, RU, SD, SE, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CT, CG, CI, CM, GA

9650294 A1 19961002 AU 1996-50294 19960307

103542 A1 19971229 EP 1996-907127

113542 B1 20021016

R1 AT, BE, CH, DB, DK, ES, PT

116499 B1 PATENT NO. US 5756533 CA 2215061 WO 9628463 HE, AU 9650294 AU 705268 EP 813542 EP 813542 EP 813-842 B1 20021016
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE,
SI, LT, LV, FI
CN 1186499 A 19980701 CN 1996-193620 19960307
JP 2001513746 T2 20010904 JP 1996-227648 19960307
AT 226213 E 20021115 AT 1996-907135 19960307
EP 1258491 A1 20021120 EP 2002-11526 19960307 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE, SI, LT, LV, FI
PL 184748 B1 20021231 PL 1996-32784 19960307
PT 813542 T 20030131 PT 1996-907135 19960307 PL 1996-322784 PT 1996-907135 ES 1996-907135 EE 1997-201 NO 1997-4148 US 1998-33897 US 1998-80928 US 1999-451920 US 2001-836443 PL 184748
PT 813542
ES 2187640
EE 4349
NO 9704148
US 5955601
US 6140505
US 6310080
US 200211368
US 6458785
US 2003216435
US 6730669
US 200426095
PRAI US 1995-402287
US 1995-391873
US 1995-302284
US 1999-451920
US 2001-3956433
US 2002-200589
OS MARPAT 129:4117 19960307 19960307 19960307 19970909 19980303 19980519 19991201 20010418 20030131 20030616 20040816 19971027 A A B1 A1 B2 A1 B2 A1 B2 A1 B2 A3 19991012 20001031 20020815 20021001 20031120 US 2002-200589 20020723 20031120 20040504 20041223 19950310 19950222 19950607 US 2004-760125 20040120 19960307 19960307 A1 A3 A1 A1 19980519 19991201

20020723

ANSWER 10 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN

ΙT

18353-92-6P
RL: SPN (Synthetic preparation), PREF (Preparation)
(heterocyclylcarbonyl amino acid hydroxyethylamino sulfonamide
retroviral protease inhibitors)
183553-92-6 CAPLUS
Propanamide, 2-amino-N-[(15,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2methylpropyl) amino|-2-hydroxy-1-[phenylmethyl]propyl]-3-(methylsulfonyl)-,
monohydrochloride, (2R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

● HC1

THERE ARE 58 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT RE.CNT 58

ANSWER 11 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

$$\mathbb{R}^{8}$$

NCR⁵R⁶CONHCHR¹CONHCHR²CH (OH) CH₂NR³So₂R⁴

L4 ANSWER 11 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

183812-50-2 CAPLUS
1-Pyrrolidineacetamide, N-[(1R)-2-[[(1S,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)amino]-2-bydroxy-1-(phenylmethyl)propyl)amino]-1-[(methylsulfonyl)methyl)-2-oxoethyl)- (GA INDEX NAME)

Absolute stereochemistry.

İT 183553-90-4P 183553-91-5P 183553-92-6P 183553-93-7P

RE: RCT (Reactant): SPN (Synthetic preparation): PREP (Preparation): RACT (Reactant or reagent)
(preparation of amino acid hydroxyethylamino sulfonamide retroviral

(preparation of management of the protesses inhibitors)

RN 1835S3-90-4 CAPLUS

CN Carbamic acid, [(1R)-2-[((1S,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl) (2-methylpropyl) amino]-2-hydroxy-1-(phenylmethyl)propyl)amino]-1[(methylthio)aethyl]-2-oxoethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

183553-91-5 CAPLUS
Carbamic acid, {(1R)-2-[(15,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl)amino]-1-[(nethylsulfonyl)methyl]-2-oxoethyl]-, 1,1-dimethylethyl ester (9CI) (CAINDEX NAME)

Absolute stereochemistry.

L4 ANSWER 11 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

THERE ARE 54 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT RE.CNT 54

L4 ANSWER 11 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

Absolute stereochemistry.

• HC1

183553-93-7 CAPLUS
Propanamide, N-[(15,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)aminol-2-hydroxy-1-(phenylmethyl)propyl)-2-[(chloroacetyl)amino]-3-(methylsulfonyl)-, (2R)- (9CI) (CA INDEX NAME)

ANSWER 12 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN 1998:324825 CAPLUS 129:16390

DN 129:16390
TI Preparation of substituted sulfonyleikanoylamino hydroxyethylamino sulfonamide retroviral protease inhibitors
Sikorski, James A.; Getman, Daniel P.; Decrescenzo, Gary A.; Devadas, Balekudrus Freskos, John N.; Lu, Hwang-fun; McDoneld, Joseph J.
G. D. Searle and Co., USA
U.S., 131 pp.
COORS: USXXAM
DT Patent
LA English
FAN.CMT 1
PATENT NO.

PATENT NO. KIND DATE

APPLICATION NO. DATE PI US 5753660 PRAI US 1996-747357 19980519 US 1996-747357 Α 19961113

US 5753660 A 19980519 US 1996-747357 19961113

US 1996-747357 19961113

MARRAT 129:16390

Sulfonylalkanoylamino hydroxyethylamino sulfonamides

RSS(0)m(CH2)mCHRIC(iW)HHCHR2CH(OH)CHNR1502R4 (W = 0, S; m, n = 0, 1, or 2; R1 = H, alkyl, alkenyl, alkenyl, hydroxyalkyl, alkoxyalkyl, cyanoslkyl, NH2COCH2, NH2COCH2CH2, NH2SO2CH2, MeSCH2, MeSCH2, MeSCH2, Resulkyl, aralkyl, alkylthioalkyl, arythioalkyl, cycloalkylalkyl R3 = alkyl, cycloalkylalkyl R4 = aryl, heteroaryl, heterocyclyl vere prepared as retroviral protease inhibitors. Thus, N-[2R-hydroxy-3-[(2-methylpropyl)[(1,3-benzodioxol-5-yl)sulfonyl]amino]-15-[phenylmethyl]propyl]-25-methyl-3-[2-(2-pyrtdyl)sthylsulfonyl]propanamide wta prepared by alkylation of the corresponding 3-mercaptopropanamide wta P2-(2-chlorocthyl)pyridine hydrochloride, followed by S-oxidation The product was assayed for HIV protease inhibitory activity (ICSO = 3 mH, ECSO = 6 mH).

191412-73-67 191412-80-37 191412-81-99

191412-83-69 191412-80-37 191412-81-99

191412-93-99 191412-93-60 191412-91-99

191413-01-19 191413-02-29 191413-03-99

191413-01-19 191413-05-59 191413-05-99

191413-01-19 191413-05-59 191413-05-99

191413-11-39 191413-11-39 191413-15-19 191413-15-19

191413-13-19 191413-15-19 191413-15-19

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191413-13-19 191413-15-19 191413-3-19

191413-13-19 191413-15-19 191413-3-19

191413-25-9 191413-3-19-19 191413-3-19

191413-25-9 191413-3-19-19 191413-3-19

191413-25-9 191413-3-19-19 191413-3-19

191413-3-19-19 191413-3-2-49 191413-3-3-19

191413-3-3-9 191413-1-19-19 191413-3-19-19

191413-3-3-9 191413-3-1-19 191413-3-3-19

191413-3-3-9 191413-3-3-0-0 191413-3-3-19

191413-3-3-9 191413-3-4-0-9 191413-3-3-19

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191413-3-3-9 191413-3-3-0-0 191413-3-3-19

191413-3-3-9 191413-3-3-0-0 191413-3-3-19

191413-3-3-9 191413-3-3-0-0 191413-3-3-19

191413-3-3-9 19

ANSWER 12 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)
BIOL (Biological study), PREP (Preparation), USES (Uses)
(prepn. of sulfomylalkanoylamino hydroxyethylamino sulfonamide
retroviral protease inhibitors)
191412-75-6 CAPLUS
Propanamide, N-[(15,2R)-3-{(1,3-benzodioxol-5-ylsulfonyl)(2methylpropyl)amino|-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-{(2-(2pyridinyl)ethyl)sulfonyl]-, (2S)-(9CI) (CA INDEX NAME) L4

Absolute stereochemistry.

191412-76-7 CAPLUS
Propanamide, N-[(15,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl) (2-methylpropyl) amino]-2-hydroxy-1-(phenylmethyl)propyl)-2-methyl-3-[[2-[(2-(1-oxido-1-pyrrolidinyl)ethyl]mino]-2-oxoethyl}sulfonyl}-, (25)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

191412-78-9 CAPLUS
Propanamide, N-[(15,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)aminoj-2-hydroxy-1-(phenylmethyl)propyl)-2-methyl-3-[[2-[(2-(4-oxido-4-morpholinyl)ethyl]amino]-2-oxoethyl}sulfonyl]-, (2S)- (9CI)(CA INDEX NAME)

Absolute stereochemistry.

methylpropyl)amino|-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[(2-oxo-2-phenylethyl)sulfonyl]-, (2S)- (9C1) (CA INDEX NAME)

Absolute stereochemistry.

191412-82-5 CAPLUS
Propanamide, N-[(15,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl]-3-[(2-(1,1-dioxido-4-thiomorpholinyl)-2-oxoethyl]sulfonyl]-2-methyl-, (2S)- (9CI) (CA INDEX

Absolute stereochemistry.

191412-83-6 CAPLUS
Butanoic acid, 4-[([2S)-3-([[1S,2R]-3-[[1,3-benzodioxol-5-ylsulfonyl) (2-methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl]amino]-2-methyl-3-oxopropyl)thio]-, ethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

191412-87-0 CAPLUS Propanamide, 3-{(1H-benzimidazol-2-ylmethyl) sulfonyl}-N-{(1S,2R)-3-{(1,3-benzodixol-5-ylsulfonyl)(2-methyl)propyl)amino]-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L4 ANSWER 12 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

191412-79-0 CAPLUS
Propanamide, N-[(1s, 2R)-3-[(1, 3-benzodioxol-5-ylsulfonyl) (2-methylpropyl) aminol-2-hydroxy-1-(phenylmethyl) propyl]-2-methyl-3-[[2-(4-morpholinyl)-2-oxoethyl]sulfonyl]-, (2s)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

191412-80-3 CAPLUS
Propanamide, N-([15,2R]-3-[(1,3-benzodioxol-5-ylsulfony1) (2-methylpropy1) aminol-2-hydroxy-1-(phanylmethyl)propy1)-2-methyl-3-[(2-oxo-2-(1-placaziny1)ethyl]sulfony1]-, monohydrochloride, (2s)- (9CI) (CA INDEX NAME)

• HC1

191412-81-4 CAPLUS Propanamide, N-[(15,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-

ANSWER 12 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

191412-88-1 CAPLUS
Propanamide, N-[(15,2R)-3-[{1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[(5-thiazolylmethyl)sulfonyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry

191412-91-6 CAPLUS
Propanamide, N-[(1S, 2R)-3-[(1,3-benzodioxol-5-ylsulfonyl) (2-methylropyl) amino] -2-hydroxy-1-(phenylmethyl)propyl)-2-methyl-3-{2-pyridinylsulfonyl}-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

191412-92-7 CAPLUS
Propanamide, N-[(15,2R)-3-[(1,3-benzodicxcl-5-ylsulfonyl)(2-methylpropyl)amino)-2-bydroxy-1-(phenylmethyl)propyl)-3-[[3-bydroxy-2-(hydroxymethyl)propyl]sulfonyl]-2-methyl-, (25)- (9C1) (CA INDEX NAME)

ANSWER 12 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN L4 (Continued)

191412-93-8 CAPLUS
D-Ribofuranoside, methyl 5-[[(25)-3-[[(15,2R]-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methyl)propyl)amino]-2-bydroxy-1-(phenylmethyl)propyl)amino]-2-methyl-3-oxopropyl]sulfonyl]-5-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

191412-95-0 CAPLUS
Propananida, N-{(18,2R)-3-{(1,3-benzodioxol-5-ylsulfonyl)}(2-methylpropyl)anino|-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-{[2-oxo-2-(2-pyridinyl)ethyl]sulfonyl]-, (2S)- (9CI) (CA INDEX NAME)

191412-96-1 CAPLUS
Propanamide, N-{(15,2R)-3-{(2,3-dihydro-1,4-benzodioxin-6-y1) sulfony1}(2-methylropy1) amlno)-2-hydroxy-1-{phenylmethyl)propy1}-2-methyl-3-{(2-oxo-2-(2-pyridiny1)ethy1)sulfony1}-, (25)- (9CI) (CA INDEX NAME)

191412-97-2 CAPLUS
Propanamide, N-([15,2R)-3-[(6-benzothiazoly|sulfonyl)(2-methylropyl)amino|-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[[2-oxo-2-(2-pyridinyl)ethyl]sulfonyl]-, (2S)- (9CI) (CA INDEX NAME)

ANSWER 12 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

 $\begin{array}{lll} 191413-02-2 & CAPLUS \\ Fropanamide, & Dr. & ([15,2R]-3-[[(2,3-dihydro-1,4-benzodioxin-6-yl)sulfonyl](2-methylropyl)-2-methyl-3-([2-oxo-2-(3-pyridinyl)*thyl]sulfonyl]-, & (2S)- (9CI) & (CA INDEX NAME) \\ \end{array}$

Absolute stereochemistry.

191413-03-3 CAPLUS
Propanamide, N-[(15,2R)-3-[(6-benzothiazolylsulfonyl)(2-methylpopyl)amino]-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[{2-oxo-2-(3-pyridinyl)ethyl}sulfonyl]-, (2S)- (SCI) (CA INDEX NAME)

Absolute stereochemistry.

191413-04-4 CAPLUS
Propanamide, N-[(15,2R)-3-[(5-benzothiazolylsulfonyl)(2-methylroyl)amino]-2-hydroxy-1-(phenylmathyl)propyl]-2-methyl-3-[[2-oxo-2-(3-pyridinyl)ethyl]sulfonyl]-, (25)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

ANSWER 12 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

191412-99-4 CAPLUS
Propanande, N-[(15,2R)-3-[(5-benzothiazolylsulfonyl)(2-methylpropyl)anino|-2-hydroxy-1-(phenylmethyl)propyl)-2-methyl-3-{[2-oxo-2-(2-pyridinyl)ethyl]sulfonyl}-, (25)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

191413-00-0 CAPLUS
Propanamide, N-[(15,2R)-3-[[(2,3-dihydro-5-benzofurany1]sulfony1](2-methylropy1)anino]-2-hydroxy-1-(phenylmethy1)propy1]-2-methyl-3-[[2-oxo-2-(2-pyridiny1)ethy1]sulfony1]-, (2S)- (9CI) (CA INDEX NAME)

191413-01-1 CAPLUS
Propanamide, N-[(15,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl) (2-methylpropyl) amino|-2-hydroxy-1-(phenylmethyl) propyl]-2-methyl-3-[[2-oxo-2-(3-pyridinyl)ethyl]sulfonyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

ANSWER 12 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued) Propanamide, N-[(15,2R)-3-[([2,3-dihydro-5-benzofuranyl)sulfonyl)(2-methylpropyl)anton]-2-hydroxy-1-(henylmethylpropyl)-2-methyl-3-[(2-oxo-2-(3-pyridinyl)ethyl)sulfonyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

191413-06-6 CAPLUS
Propananide, N-{(15,2R)-3-((1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)anino|-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-{[2-oxo-2-(4-pyridinyl)ethyl]sulfonyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

191413-07-7 CAPLUS
Propanamide, N-[(15,2R)-3-[[(2,3-dihydro-1,4-benzodioxin-6-y1)sulfony1](2-methylpropy1)amino]-2-hydroxy-1-(phenylmethyl)propy1]-2-methyl-3-[[2-oxo-2-(4-pyridiny1)ethyl)sulfony1]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

191413-08-8 CAPLUS
Propananide, N-[(15,2R)-3-{(6-benzothiazolylsulfonyl)(2-methylropyl)anino}-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[[2-oxo-2-(4-pyridinyl)ethyl]sulfonyl]-, (25)- (9CI) (CA INDEX NAME)

L4 ANSWER 12 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

RN 191413-09-9 CAPLUS
Propanamide, N-[(15,2R)-3-[(5-benzothiazolylsulfonyl)(2-methylpropyl) aminoj-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[[2-oxo-2-(4-pyridinyl)ethyl]sulfonyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistm:

RN 191413-10-2 CAPLUS
Propananide, N-[(15,2R)-3-[[(2,3-dihydro-5-benzofuranyl)sulfonyl](2-methylpropyl)anino]-2-bydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[(2-oxo-2-(4-pyridinyl)ethyl)sulfonyl]-, (25) (CA INDEX NAME)

Absolute stereochemistry.

RN 191413-11-3 CAPLUS
Propananied, N-[(15,2R)-3-{{(2,3-dihydro-1,4-benzodioxin-6-y1)sulfonyl}(2-sethylpropyl)anio)-2-hydroxy-1-(phenylmethyl)propyl]-2-sethyl-3-{(IH-pyrazol-3-ylmethyl)sulfonyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry

L4 ANSWER 12 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

RN 191413-15-7 CAPLUS
Propananide, N-[(15,2R)-3-{{(2,3-dihydro-1,4-benzodioxin-6-yl)sulfonyl}(2-methylpropyl)anino]-2-bydroxy-1-(phenylmethyl)propyl)-2-methyl-3-{{2-oxo-2-phenylethyl}sulfonyl}-, (25)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 191413-16-8 CAPLUS
Propanamide, N-[[15,2R]-3-[(6-benzothiazolylsulfonyl) (2-methylpropyl) amino]-2-hydroxy-1-[phenylmethyl]propyl]-2-methyl-3-[(2-oxo-2-phenylethyl)sulfonyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 191413-17-9 CAPLUS
Propanamide, N-[(15,2R)-3-[(5-benzothiazolylsulfonyl)(2-methylpropyl)amino)-2-hydroxy-1-[phenylmethyl)propyl]-2-methyl-3-[(2-oxo-2-phenylethyl)sulfonyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L4 ANSWER 12 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

RN 191413-12-4 CAPLUS
Propananide, N-[(1S,2R)-3-[(6-benzothiazolylsulfonyl)(2-nethylpropyl)anion]-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[(1H-pyrazol-3-ylmethyl)sulfonyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 191413-13-5 CAPLUS
CN Propanamide, N-[(15, ZR)-3-[(5-benzothiazolylsulfonyl) (2-methylpropyl) aminol-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[(1H-pyrazol-3-ylmethyl)sulfonyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 191413-14-6 CAPLUS
CN Propanamide, N-[(1S, 2R)-3-[([2,3-dihydro-5-benzofuranyl)sulfonyl](2-methylpropyl)amino]-2-hydroxy-1-[phenylmethyl]propyl]-2-methyl-3-[(lH-pyrazol-3-ylmethyl)sulfonyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L4 ANSWER 12 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

RN 191413-18-0 CAPLUS
Propanamide, N-[[15,2R]-3-[[(2,3-dihydro-5-benzofuranyl)sulfonyl](2-methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[(2-oxo-2-phenylethyl)sulfonyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 191413-19-1 CAPLUS Propananide, N-{(15,2R)-3-{((2,3-dihydro-1,4-benzodioxin-6-y1)sulfonyl](2-methylpropyl)anion|-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-{(5-thiazolylmethyl)sulfonyl]-, (25)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 191413-20-4 CAPLUS
CN Propanamide, N-[(15,2R)-3-[(6-benzothiazolylaulfonyl)(2-methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[(5-thiazolylmethyl)aulfonyl]-, (25)-(9CI) (CA INDEX NAME)

L4 ANSWER 12 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

RN 191413-22-6 CAPLUS
CN Propananide, N-[(15,2R)-3-[(5-benzothiazolylsulfonyl) (2methylprepyl) anino]-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[(5thiazolylmethyl)sulfonyl]-, (25)- (9Cl) (CA INDEX NAME)

Absolute stereochemistry.

RN 191413-24-8 CAPLUS
Propanamide, N-[(15,2R)-3-[([2,3-dihydro-5-benzofuranyl)sulfonyl][2-methylpropyl)amino-12-hydroxy-1-[phenylmethyl)propyl]-2-methyl-3-[(5-thiazolylmethyl)sulfonyl]-, (25)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 191413-26-0 CAPLUS
Propanamide, N-{(15,2R)-3-[{(2,3-dihydro-1,4-benzodioxin-6-y1)sulfonyl](2-methylpropyl)aminoj-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[[2-(2-pyridinyl)ethyl]sulfonyl]-, (25)- (9CI) (CA INDEX NAME)

Absolute stereochemistry

L4 ANSWER 12 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

RN 191413-36-2 CAPLUS
Propananide, N-[(15,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl) (2-methylpropyl) amino)-2-hydroxy-1-(phenylmethyl)propyl)-2-methyl-3-[(2-(3-pyridinyl)ethyl]sulfonyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 191413-38-4 CAPLUS

Propananide, N-[(15,2R)-3-[[(2,3-dihydro-1,4-benzodioxin-6-yl)sulfonyl](2-methylpropyl)anio]-2-hydroxy-1-[phenylmethyl]propyl]-2-methyl-3-[[2-(3-pyridinyl)ethyl]sulfonyl]-, (25)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 191413-40-8 CAPLUS
CN Propanamide, N-[(15,2R)-3-[(6-benzothiazolylsulfonyl) (2methylpropyl) aminoj-2-hydroxy-1-[phenylmethyl)propyl]-2-methyl-3-[[2-(3pyridinyl)ethyl]sulfonyl)-, (25)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L4 ANSWER 12 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

RN 191413-29-3 CAPLUS
Propananide, N-[(15,2R)-3-[(6-benzothiazolylsulfonyl)(2-methylpropyl) ani no]-2-bydroxy-1-[phenylmethylpropyl]-2-methyl-3-[[2-(2-pyridinyl)ethyl]sulfonyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 191413-31-7 CAPLUS
CN Propanaide, N-[(15,2R)-3-{(5-benzothiazolylsulfonyl)(2-aethylpropyl)aino]-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[[2-(2-pyridinyl)ethyl]sulfonyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry

RN 191413-34-0 CAPLUS

CN Propananide, N-[(IS,2R)-3-[([2,3-dihydro-5-benzofurany])sulfony]] (2-methylpropyl)anino]-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[[2-(2-pyridinyl)ethyl]sulfonyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L4 ANSWER 12 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)
CN Propanamide, N-[(15,2R)-3-((5-benzothiazolylsulfonyl)(2-methylpropyl)a-mino]-2-hydroxy-1-(phenylmethyl)propyl)-2-methyl-3-[(2-(3-pyridinyl)ethyl]sulfonyl]-, (2S)- (9C1) (CA INDEX NAME)

Absolute stereochemistry

RN 191413-45-3 CAPLUS

Tropanamide, N-[(15,2R)-3-[((2,3-dihydro-5-benzofuranyl)sulfonyl](2-methylpropyl)amino]-2-hydroxy-1-[phenylmethyl)propyl]-2-methyl-3-[[2-(3-pyridinyl)ethyl]sulfonyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry

RN 191413-47-5 CAPLUS
Propanamide, N-[(15,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl) aminoj-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[(2-(4-pyridinyl)ethyl)sulfonyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 191413-49-7 CAPLUS
Propananide, N-[(15,2R)-3-[[(2,3-dihydro-1,4-benzodioxin-6-y1)sulfonyl](2-methylpropyl)anion)-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[[2-(4-pyridinyl)ethyl]sulfonyl]-, (25)- (9CI) (CA INDEX NAME)

ANSWER 12 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

191413-50-0 CAPLUS
Propanamide, N-[(15,2R)-3-[(6-benzothiazolylsulfonyl) (2-methylpropyl) amino|-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[[2-(4-pyridinyl)ethyl]sulfonyl]-, (2S)- (9CI) (CA INDEX NAME)

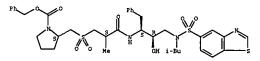
Absolute stereochemistry.

191413-51-1 CAPLUS
Propanamide, N-[(15,2R)-3-[(5-benzothiazolylsulfonyl)(2-methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[[2-(4-pyridinyl)ethyl]sulfonyl]-, (25)- (9Cl) (CA INDEX NAME)

Absolute stereochemistry.

Absolute stereochemistry.

ANSWER 12 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



191413-61-3 CAPLUS
1-Pyrrolidinecarboxylic acid, 2-[[[(2S)-3-[[(1S,2R)-3-[[(2,3-dihydro-5-benzofuranyl)]aulfonyl)](2-methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl)amino]-2-methyl-3-oxopropyl]sulfonyl]methyl]-, phenylmethyl ester, (2S)- [9CI] (CA INDEX NAME)

Absolute stereochemistry.

Absolute stereochemistry.

Absolute stereochemistry.

L4 ANSWER 12 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

191413-56-6 CAPLUS
1-Pyrrolidinecarboxylic acid, 2-{{{(2S)-3-{{(1S,2R)-3-{{(2,3-dihydro-1,4-benzodioxin-6-yl)sulfonyl]}(2-methyl)propyl)amino]-2-hydroxy-1-(phenylmethyl)propyl)amino]-2-methyl-3-oxporpoyl]sulfonyl]methyl-, phenylmethyl ester, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

191413-57-7 CAPLUS
1-Pyrrolidinecarboxylic acid, 2-[[[{2S}]-3-[[{1S},2R]-3-[{6-benzothiazolylsulfonyl] (2-methylpropyl) amino]-2-hydroxy-1-(phenylmethyl)propyl)amino]-2-methyl-3-oxopropyl]sulfonyl]methyl]-, phenylmethyl ester, (2S)- (9CI) (CA INDEX NAME)

191413-58-8 CAPLUS
1-Pyrrolidinecarboxylic acid, 2-[[[(2S)-3-[[(1S,2R)-3-[(5-benzothiazolylsulfonyl)(2-methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl)amino]-2-methyl-3-oxporropyl]sulfonyl]methyl]-, phenylmethyl ester, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

ANSWER 12 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

 $191413-65-7 \quad CAPLUS \\ Propanamide, N-[(1S, 2R)-3-[(6-benzothiazolylsulfonyl)(2-methylpropyl)amino|-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[[3-oxo-3-(1-piperazinyl)propyl]sulfonyl]-, (2S)- (9CI) (CA INDEX NAME)$

Absolute stereochemistry.

191413-66-8 CAPLUS
Propanamide, N-[(15,2R)-3-[(5-benzothiazolylsulfonyl)(2-methylropyl)amino]-2-hydroxy-1-(phenylmethylropyl]-2-methyl-3-[[3-oxo-3-(1-piperazinyl)propyl]sulfonyl]-, (2S)- (9Cl) (CA INDEX NAME)

Absolute stereochemistry.

191413-67-9 CAPLUS
Propananide, N-[(15,2R)-3-[[(2,3-dihydro-5-benzofuranyl)sulfonyl](2-methylropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[[3-oxo-3-(1-piperazinyl)propyl]sulfonyl]-, (2S)- (SCI) (CA INDEX NAME)

Absolute stereochemistry.

191413-68-0 CAPLUS

L4 ANSWER 12 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)
CN Propananide, 3-{[3-[(2-aminoethyl)amino]-3-exopropyl]sulfonyl]-N-{[15,2R]-3-{[1,3-benzodiosuci-5-yllsulfonyl]-2-exthylpropyl]amino]-2-hydroxy-1(phenylmethyl)propyl]-2-methyl-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 191413-69-1 CAPLUS
CN Propanamide, 3-[(3-[(2-aminoethyl)amino]-3-oxopropyl]sulfonyl]-N-[(15,2R)-3-[([2,3-dihydro-1,4-benzodioxin-6-yl]sulfonyl](2-methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 191413-70-4 CAPLUS
CN Propananide, 3-{[3-[(2-aminoethy1)amino]-3-oxopropy1]sulfony1]-N-{(15,2R)-3-[(6-benzothiacoly1sulfony1)(2-methy1propy1)amino]-2-hydroxy-1-(phenylmethy1)propy1]-2-methy1-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry

RN 191413-71-5 CAPLUS
CN Propananide, 3-[(3-[(2-aminoethyl)amino]-3-oxopropyl]sulfonyl]-N-[(15,2R)-3-((5-benzothiazolylsulfonyl)(2-methylpropyl)amino]-2-hydroxy-1-

L4 ANSWER 12 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued) Absolute stereochemistry.

RN 191413-77-1 CAPLUS
CN Propanamide, N-[(15,2R)-3-[(5-benzothiazolylsulfonyl)(2-methylpropyl)aninoj-2-hydroxy-1-(phenylmethyl)propyl]-3-[(3-hydroxy-2-(hydroxymethyl)propyl]sulfonyl]-2-methyl-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 191413-79-3 CAPLUS
CN Propananide, N-[(15,2R)-3-[[(2,3-dihydro-5-benzofurany1)sulfony1](2-methylpropy1)anio|2-hydroxy-1-(phenylmethyl)propy1]-3-[(3-hydroxy-2-(hydroxymethyl)propy1)sulfony1]-2-methyl-, (25)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 191413-82-8 CAPLUS
CN Propananide, N-[(15,2R)-3-[(2,3-dihydro-1,4-benzodioxin-6-yl)sulfonyl](2-aethylpropyl)aniol-2-hydroxy-1-(phenylmethyl)propyl)-2-aethyl-3-[(2R)-2-pyrrolidinylmethyl]sulfonyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L4 ANSWER 12 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued) (phenylmethyl)propyl]-2-methyl-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 191413-72-6 CAPLUS
CN Propanamide, 3-[(3-[(2-aminoethyl)amino]-3-oxopropyl]sulfonyl]-N-[(15,2R)-3-[((2,3-dihydro-5-benzofuranyl)sulfonyl](2-methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-, (25)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 191413-73-7 CAPLUS
Propananied, N-{(15,2R)-3-{((2,3-dihydro-1,4-benzodioxin-6-y1)sulfonyl){2-methylpropyl}anio]-2-hydroxy-1-(phenylmethyl)propyl]-3-{(3-hydroxy-2-(hydroxymethyl)propyl]sulfonyl]-2-methyl-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 191413-75-9 CAPLUS
Propanamide, N-[(15,2R)-3-[(6-benzothiazolylsulfonyl)(2methylpropyl) aminoj-2-hydroxy-1-(phenylmethyl)propyl]-3-[[3-hydroxy-2(hydroxymethyl)propyl]sulfonyl]-2-methyl-, (2S)- (9CI) (CA INDEX NAME)

14 ANSWER 12 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

RN 191413-84-0 CAPLUS
CN Propanamie N-{(15,2R)-3-[(6-benzothiszolylsulfonyl)(2-methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl)-2-methyl-3-[[(2R)-2-pyrrolidinylmethyl]sulfonyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 191413-86-2 CAPLUS
Propanamide, N-[(15,2R)-3-[(5-benzothiazolylsulfonyl) (2-methylpropyl) aminoj-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[[(2R)-2-pyrrolidinylmethyl]sulfonyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 191413-88-4 CAPLUS
CN Propananide, N-[(15,2R)-3-[((2,3-dibydro-5-benzofurany1)sulfony1](2methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl)-2-methyl-3-[[(2R)-2pyrrolidinylmethyl]sulfonyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 191414-00-3 CAPLUS

L4 ANSWER 12 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

CN 1-Fiperazinecarboxylic acid, 4-(3-{(1(25)-3-{(1(3,-2R)-3-(1(3,-3-benzodioxol-5-ylouifony)! (2-methylpropy)! amino] -2-methyl-3-oxopropyl]sulfonyl]-1-oxopropyl]-, 1,1-dimethylethyl ester

(9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-B

RN 191414-06-9 CAPLUS
CN 1-Piperazinecarboxylic acid, 4-[[[(25)-3-[[(15,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl) (2-methylpropyl) amino]-2-hydroxy-1-(phenylmethyl)propyl) amino]-2-methyl-3-oxopropyl]sulfonyl]acetyl]-, 1,1-dimethylethyl ester (SCI) (CA INDEX NAME)

Absolute stereochemistry.

L4 ANSWER 12 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued) CH 1

CRN 191412-85-8 CMF C29 H38 N4 O8 52

Absolute stereochemistry

CM 2

CRN 76-05-1 CMF C2 H F3 O2

F-C-CO2H

RN 207686-82-6 CAPLUS
CN Propananide, N-[(15,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl) (2methyl-propyl) anion) 2-hydroxy-1-(phenylmethyl) propyl]-2-methyl-3-[(1Hpyrazol-4-ylmethyl) sulfonyl]-, (2S)-, mono(trifluoroacetate) (salt) (9CI)
(CA INDEX NAME)

CM 1

CRN 191412-86-9 CMF C29 H38 N4 O8 52

Absolute stereochemistry.

CH 2

CRN 76-05-1 CMF C2 H F3 02 L4 ANSWER 12 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

PAGE 1-B

RN 207686-80-4 CAPLUS
CN Propanamide, N-[(15,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl]-3-[(1H-imidazol-4-ylnethyl)sulfonyl)-2-methyl-, (2S)-, mono(trifluoroacetate) (salt) (9CI) (CA INDEX NAME)

CH 1

CRN 191412-84-7 CMF C29 H38 N4 08 S2

Absolute stereochemistry.

CM 2

CRN 76-05-1 CMF C2 H F3 O2

Г Г—С—СО2Н

RN 207686-81-5 CAPLUS

Propanamide, N-[(IS,2R)-3-[(I,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)anino]-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[(IH-pyrazol-3-ylmethyl)sulfonyl]-, (2S)-, mono(trifluoroacetate) (salt) (9CI) (CA INDEX NAMES)

L4 ANSWER 12 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued

F-C-CO2H

RN 207686-83-7 CAPLUS
CN Propanamide, N-[(1S,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)amino]-2-hydroxy-l-(phenylmethyl)propyl]-2-methyl-3-[((2R)-2-pyrrolidinylmethyl]sulfonyl]-, (2S)-, mono(trifluoroacetate) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 191412-90-5 CMF C30 H43 N3 O8 S2

Absolute stereochemistry.

C24 2

CRN 76-05-1

F-C-C021

RN 207686-84-8 CAPLUS
CN Propanamids, N-[(15,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[[(25)-2-pyrrolidinylmethyl)sulfonyl]-, (25)-, mono(trifluoroacetate) (salt) (9CI) (CA INDEX NAME)

CM 1

TRN 191412-89-2 TMF C30 H43 N3 O8 S2

L4 ANSWER 12 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

CH 2

CRN 76-05-1 CMF C2 H F3 02

183004-99-1P 183005-01-8P 191413-54-4P 191413-92-0P 191413-94-2P 191413-98-0P 191414-03-8P 191414-07-0P 191414-09-2P 191414-10-5P 191414-11-6P 191414-12-3P 191414-13-6P 191414-13-6P 191414-13-9P 191414-13-9P 191414-24-1P 191414-26-3P 191414-27-4P 191414-28-5P 191466-20-3P 191466-20-1P 207686-74-6P 207686-75-7P ΙŤ

207686-75-79
RL: RCT (Reactant); SPN (Synthetic preparation); FREP (Preparation); RACT (Reactant or reagent)
(preparation of sulfonylalkanoylamino hydroxyethylamino sulfonamide retroviral protease inhibitors)
183004-99-1 CAPLUS
Ethanethioic acid, S-[(2S)-3-[(1S,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl]amino]-2-methyl-3-oxopropyl] ester (9CI) (CA INDEX NAME)

RN 183005-01-8 CAPLUS

L4 ANSWER 12 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN Absolute stereochemistry. (Continued)

191413-98-6 CAPLUS
1-Piperazinecarboxylic acid, 4-[3-[{(25)-3-[{(15,2R)-3-{(1,3-benzodioxcl-5-ylsulfonyl)(2-methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl)amino]-2-methyl-3-oxopropyl]thio]-1-oxopropyl]-, 1,1-dimethylethyl ester (9CI)(CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-B

191414-04-7 CAPLUS
Propanamide, N-{(1S,2R)-3-{(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)aminol-2-hydroxy-1-(phenylmethyl)propyl}-2-methyl-3-{[2-(4-morpholinyl)-2-oxoethyl]thio]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

ANSWER 12 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued) Propanamide, N-[(15,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl) (2-methylpropyl) amino]-2-hydroxy-1-(phenylmethyl)propyl}-2-methyl-3-(methylthio)-, (25)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

191413-54-4 CAPLUS
1-Pyrrolidinecarboxylic acid, 2-{[[(25)-3-[[(15,2R)-3-[(1,3-benzodioxol-5-ylsulfony])(2-methylpropyl)amino]-2-bydroxy-1-{phenylmethyl}propyl]amino]-2-methyl-3-oxopropyl]sulfonyl]methyl]-, phenylmethyl ester, (25) - (9CI) (CA INDEX NAME)

Absolute stereochemistry.

191413-92-0 CAPLUS Propanamide, N-{(15,2R)-3-{(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)aminol-2-hydroxy-1-(phenylmethyl)propyl)-2-methyl-3-{(2-(2-pyridinyl)ethyl]thiol-, (2S)- (9CI) (CA INDEX NAME)

191413-94-2 CAPLUS
Propanamide, N-[(15,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[(2-oxo-2-[(2-(1-pyrrolidinyl)ethyl)amino]ethyl]thio]-, (2S)- (9CI) (CA INDEX NAME)

ANSWER 12 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

191414-05-8 CAPLUS
1-Piperazinecarboxylic acid, 4-[[{(2S)-3-[((1S,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl)amino]-2-methyl-3-oxopropyl]thio]acetyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-B

191414-07-0 CAPLUS
Propanande, N-[(15,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)anino|-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[(2-oxo-2-phenylethyl)thio]-, (2S)- (9CI) (CA INDEX NAME)

L4 ANSWER 12 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

191414-09-2 CAPLUS
Propanamide, N=[(15,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)amino|-2-hydroxy-1-(phenylmethyl)propyl]-3-[(1H-imidazol-4-ylmethyl)thio]-2-methyl-, (25)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

191414-10-5 CAPLUS
Propanamide, N-([15,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)amino|-2-bydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[(H-pyrazol-3-ylmethyl)thio]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

191414-11-6 CAPLUS
Propanamide, N-[(15,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)amino|-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[(H-pyrazol-4-ylmethyl)thio]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L4 ANSWER 12 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

191414-18-3 CAPLUS
1-Pyrrolidinecarboxylic acid, 2-[[[(25)-3-[[(15,2R)-3-[(1,3-benzodioxol-5-ylsulfony])(2-methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl)amino]-2-methyl-3-oxopropyl]thio]methyl]-, phenylmethyl ester, (2R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

191414-21-8 CAPLUS
1-Pyrrolidinecarboxylic acid, 2-[[[(2S)-3-[[(1S,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)amino]-2-bydroxy-1-(phenylmethyl)propyl)amino]-2-methyl-3-oxopropyl)sulfonyl)methyl]-, phenylmethyl ester, (2R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

191414-24-1 CAPLUS
Propanamide, N-[(18,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)amino]-2-hydroxy-1-(phanylmethyl)propyl]-2-methyl-3-(2-pyridinylthio)-, (25)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L4 ANSWER 12 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

191414-12-7 CAPLUS
Propanamide, 3-{(!H-benzimidazol-2-ylmethyl)thio]-N-{(!s, 2R)-3-{(1,3-benzodixol-5-ylsulfonyl){2-methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl)-2-methyl-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

191414-13-8 CAPLUS
Propanamide, N-[(15,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)amino|-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[(5-thiazolylmethyl)thio]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

191414-15-0 CAPLUS
1-Pyrrolidinecarboxylic acid, 2-[{[(2S)-3-[[(1S,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)amino]-2-hydroxy-1-[phenylmethyl]propyl]amino]-2-methyl-3-cxopropyl]thio]methyl]-, phenylmethyl ester, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

ANSWER 12 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

191414-26-3 CAPLUS
D-Ribofuranoside, methyl 5-5-[(25)-3-[[(15,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)amino]-2-bethyl-3-oxopropyl]-2,3-0-(1-methylethylidene)-5-thio-(9CI) (CA INDEX

Absolute stereochemistry.

PAGE 1-B

INTERPRETARY CAPTUS

PRINOfuranoside, methyl 5-[[(25)-3-[[(15,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl)amino]-2-methyl-3-oxopropyl)sulfonyl]-5-deoxy-2,3-0-(1-methylethylidene)- (9CI) (CA INDEX NAME)

L4 ANSWER 12 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN

(Continued) PAGE 1-A

PAGE 1-B

191414-28-5 CAPLUS
Propananida, N-[(15,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)amino]-2-bydroxy-1-(phenylmethyl)propyl]-3-[(3-bydroxy-2,2-bis(hydroxymethyl)propyl]thio]-2-methyl-, (25)- (9CI) (CA INDEX NAME)

191486-19-8 CAPLUS
Propanamide, N-[3-[(1,3-benzodioxol-5-ylsulfonyl) (2-methylpropyl) amino]-2-bytoxyn-1-(phenylmethyl)propyl]-2-methyl-3-[[(2-phenyl-1,3-dioxan-5-yl)methyl]thio]-, [5[s(15,2R)]]-[partial]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L4 ANSWER 12 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN Absolute stereochemistry. (Continued)

174303-66-3P 183004-74-2P 183004-77-5P 183182-2P-8P 191412-77-8P 191412-84-7P 191412-85-8P 191412-86-9P 191412-89-2P 191412-90-5P 191412-89-2P

191412-90-59 191412-94-99
RL: SPN (Synthetic preparation), PREP (Preparation)
(preparation of sulfonylalkancylamino hydroxyethylamino sulfonamide retroviral protease inhibitors)
174303-66-3 CAPLUS
Propanamide, N-[(15,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylroyyl)amino]-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-(methylsulfonyl)-, [2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

183004-74-2 CAPLUS
Propanamide, N=[[15,2R]-3-[[1,3-benzodioxol-5-ylsulfonyl](2-methylpropyl) amino]-2-hydroxy-1-[phenylmethyl]propyl]-2-methyl-3-[[R]-methylsulfinyl]-, (2S)- [9CI) (CA INDEX NAME)

Absolute stereochemistry.

183004-77-5 CAPLUS
Propanamide, N-[{15,2R}-3-[{(2-amino-6-benzothiazoly1)sulfony1}(2-mathylpropy1)amino]-2-bydroxy-1-(phenylmethyl)propy1]-2-methyl-3-(methylsulfony1)-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L4 ANSWER 12 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

191486-20-1 CAPLUS
Propanamide, N-[3-[(1,3-benzodioxol-5-ylsulfonyl) (2-methylpropyl) amino]-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[[(2-phenyl-1,3-dioxan-5-yl)methyl]sulfonyl]-, [5[s(15,2R)]}-[partial]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

207686-74-6 CAPLUS Propanamide, N-[(15,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)aminol-2-hydroxy-1-(phenylmethyl)propyl)-2-methylp-3-[[2-[(4-morpholinyl)ethyl]amino]-2-oxoethyl]thiol-, (2S)- (9CI) (CA INDEX NAME)

207686-75-7 CAPLUS
Propanamide, N-([15,2R]-3-{[1,3-benzodioxol-5-ylsulfony1)(2-methylpropy1)-2-hydroxy-1-{phenylmethylppropy1}-2-methyl-3-[[2-oxo-2-(4-thiomorpholiny1)ethyl]thio]-, (2S)- (9CI) (CA INDEX NAME)

L4 ANSWER 12 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

183182-29-8 CAPLUS
Propanamide, N-[(15,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)amino|-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[(S)-methylsulfinyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

191412-77-8 CAPLUS
Propanamide, N-[(15,2R)-3-[(1,3-benzodioxol-5-ylsulfony1)(2-methylropyl)aminoj-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[[3-oxo-3-(1-piperazinyl)propyl]sulfonyl]-, monohydrochloride, (25)- [9CI) (CA

Absolute stereochemistry.

• HC1

191412-84-7 CAPLUS
Propanamide, N-[[15,2R]-3-[(1,3-benzodioxol-5-ylsulfonyl) (2-methylpropyl) amino]-2-hydroxy-1-(phenylmethyl) propyl]-3-[(1H-imidazol-4-ylmethyl)sulfonyl]-2-methyl-, (25)- (9Cl) (CA INDEX NAME)

L4 ANSWER 12 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

191412-85-8 CAPLUS
Propanamide, N-[(15,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)amino|-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[(lH-pyrazol-3-ylmethyl)sulfonyl]-, (2S)- (9CI) (CA INDEX NAME)

191412-86-9 CAPLUS
Propanamide, N-([15,2R)-3-[(1,3-benzedicxol-5-ylsulfonyl)(2-methylpropyl)amino|-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[(lH-pyrazol-4-ylmethyl)sulfonyl]-, (2S)- (9CI) (CA INDEX NAME)

191412-89-2 CAPLUS
Propanamide, N-{ [15,2R}-3-[(1,3-benzodioxol-5-ylsulfonyl) (2-methylpropyl) amino|-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[[(2S)-2-pyrrolidinylmethyl]sulfonyl]-, (2S)- (9CI) (CA INDEX NAME)

ANSWER 13 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN 1998:41716 CAPLUS 128:115228

AN DN TI

Preparation of sulfonylalkanoylamino hydroxyethylamino sulfonamide retroviral protease inhibitors

retroviral protease inhibitors
Getman, Daniel P., Decrescenzo, Gary A.; Freskos, John N.; Vazquez,
Michael L.; Sikorski, James A.; Devadas, Belekudru; Nagarajan, Srinivasan;
Mcdonald, Joseph J.
G.D. Searle and Co., USA
U.S., S7 pp., Cont.-in-part of U.S. Ser. No. 401,838, abandoned.
CODEN: USKKAM IN

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Patent

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APPLICATION NO. DATE

APPLICATION NO. DATE

A 19980106 US 1995-478625 19950607

9628418 A1 19960919 CA 1996-2215066 19960307

W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, NN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI

RW: KE, LS, MW, SD, SZ, UG, AT, RE, CH, DE, DK, ES, FI, FR, GB, GR, LE, IT, LU, MC, NL, PT, SE, BF, BJ, CT, CG, CI, CM, GA
9666951 A1 19961002 AU 1996-66951 19960307

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SI, LT, LV, FT
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CN 1183767 A 19980630 CN 1996-193609 19960307
BR 9607450 A 19980630 BR 1996-7450 19960307
BP 1052250 A1 20001115 EP 2000-114155 19960307
EP 1052250 B1 20040714
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE, SI, LT, LV, FI

AT 201014 E 20010515 AT 1996-911229 19960307
DF 813519 T 2001031 PT 1996-911229 19960307
DF 813519 T 20010016 ES 1996-911229 19960307
DF 813519 T 20010016 PT 1996-911229 19960307 EP 813519 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE, SI, LT, LV, FI

AT 201014
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ES 1995-911229
19960307
PT 813519
T 20011031
PT 1995-911229
19960307
PL 186059
B1 20030930
PL 1995-322169
19960307
AT 271034
E 20040715
AT 2001-114155
19960307
EE 4340
B1 20040816
EE 1997-199
19960307
NO 9704146
A 19971107
NO 1997-4146
19970909
NO 310353
B1 20010625
GR 3036254
T3 20011031
GR 2001-401103
20010724
PRAI US 1995-401839
B2 19950310
US 1995-478625
A 19350607
EF 1956-911229
A3 19960307
WO 1996-US2662
W 1996-US2662
W 19960307
WO 1996-US2662
W 1996-US2662
SM MARPAT 128:115228
AB Sulfonylaikanoylamino hydroxyethylamino sulfonamide compds.
RS5(0)t(GR2)nGRICONHCHR2CH(GR)GR2NR3502R4 (R1 = H, alkyl, alkenyl, alkynyl, hydroxyalkyl, alkoxyalkyl, cyanoalkyl, CH2CONH2, CH2CH2CONH2, arylthioalkyl, cycloalkylalkyl; R3 = alkyl, cycloalkyl, alkylthioalkyl, arylthioalkyl, cycloalkylalkyl; R1 = alkyl, cycloalkyl, cycloalkylathyl; R4 = bazoo-fused heteroaryl or heterocyclyl, n, t = 0-2) were prepared as retroviral protease inhibitors. Thus, N-[2R-bydroxy-3-[(2-methylpropyl)]([1,3-benzodioxol-5-yl) sulfonyl] amino]-15-

L4 ANSWER 12 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

191412-90-5 CAPLUS
Propanamide, N-[(15,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)amino|-2-bydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[[(2R)-2-pyrrolidinylmethyl]sulfonyl]-, (2S)- (9CI) (CA INDEX NAME)

191412-94-9 CAPLUS
Propanamide, N-[(15,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)aminoj-2-bydroxy-1-(phenylmethyl)propyl]-3-[(3-hydroxy-2,2-bis(hydroxymethyl)propyl]sulfonyl]-2-methyl-, (2S)- (9CI) (CA INDEX NAME)

THERE ARE 43 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT RE.CNT 43

ANSWER 13 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued) (phenylmethyl)propyl]-2S-methyl-3- (methylus)fonyl)propanamide was prepd. and assayed for HIV protesse inhibitory activity (IC50 = 2 nM; EC50 = 20

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nH;
174303-66-3P 183004-72-0P 183004-73-1P
183004-74-2P 183004-78-6P 183182-29-6P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological
study, unclassified), SPN (Synthetic preparation); THU (Therapeutic use);
BIOL (Biological study); PREP (Preparation) USES (Uses)
(preparation of sulfonylalkanoylamino hydroxyethylamino sulfonamide
retroviral protease inhibitors)
174303-66-3 CAPLUS
Propanamide, N-((15,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl) (2methylpropyl) aminol-2-hydroxy-1-(phenylmethyl)propyl)-2-methyl-3(methylpulfonyl)-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

183004-72-0 CAPLUS
Propanamide, N-([15,2R)-3-[[(2,3-dihydro-1,4-benzodioxin-6-yl)sulfonyl](2-methylpropyl)amino|-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-(methylsulfonyl)-, (25)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

183004-73-1 CAPLUS
Propanamide, N=[(15,2R)-3-[(6-benzothiszolylsulfonyl)(2-methylpropyl)amino]-2-bydroxy-1-(phenylmethyl)propyl]-2-methyl-3-(methylsulfonyl)-, (2S)- (9CI) (CA INDEX NAME)

1.4 ANSWER 13 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

183004-74-2 CAPLUS
Propanamide, N-[(15,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)amino|-2-bydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[(R)-methylsulfinyl]-, (2S)- (9CI) (CA INDEX NAME)

183004-78-6 CAPLUS
Propanamide, N-[(15,2R)-3-[(5-benzothiszolylsulfonyl) (2-methylpropyl) amino|-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-(methylsulfonyl)-, (25)- (9CI) (CA INDEX NAME)

183182-29-8 CAPLUS
Propanamide, N-[(15,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[(s)-methylsulfinyl}-, (2S)- (9CI) (CA INDEX NAME)

ANSWER 13 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

retroviral protease inhibitors)

183004-75-3 CAPUS

Propanamide, N-[(15,2R)-3-[[(2,3-dihydro-5-benzofuranyl)sulfonyl](2-methylpropyl)amino]-2-bydroxy-1-(phenylmethyl)propyl]-2-methyl-3-(methylsulfonyl)-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

183004-76-4 CAPLUS
Carbanic acid, [5-[[[(2R,35)-2-hydroxy-3-[[(25)-2-methyl-3-(methylsulfonyl)-1-oxopropyl]amino]-4-phenylbutyl][(2-methylpropyl)|amino]sulfonyl]-1H-benzimidazol-2-yl]-, methyl ester (9CI)(CA INDEX NAME)

Absolute stereochemistry.

Absolute stereochemistry.

RE.CNT 58 THERE ARE 58 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 13 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

183004-99-1P 183005-01-8P
RL: RCT (Reactant): SPN (Synthetic preparation): PREP (Preparation): RACT (Reactant or reagent)
(preparation of sulfonylalkanoylamino hydroxyethylamino sulfonamide retroviral protease inhibitors)
183004-99-1 CAPLUS
Ethanethioic acid, S-[(2S)-3-{[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl]amino]-2-methyl-3-oxopropyl) ester (9CI) (CA INDEX NAME)

183005-01-8 CAPLUS
Propanande, N-[(15,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl) (2-methylpropyl) amino]-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-(methylthio)-, (25)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

183004-75-3P 183004-76-4P 183004-77-5P RL: SPN (Synthetic preparation) FREP (Preparation) (preparation of sulfonylalkanoylamino bydroxyethylamino sulfonamide

ANSWER 14 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN 1997:450087 CAPLUS 127:65754

127:65754
Preparation of N-[2-hydroxy-4-phenyl-3-(sulfonylalkanoylamino) butyl] arylsu lfonamides and analogs as retroviral protease inhibitors Sikorski, James A.; Getnan, Daniel P.; Decrescenzo, Gary A.; Devadas, Balekudru; Freskos, John N.; Lu, Hwang-fun, Mcdonald, Joseph J. G.D. Searle and Co., USA; Sikorski, James A.; Getnan, Daniel P.; Decrescenzo, Gary A.; Devadas, Balekudru; Freskos, John N.; Lu, Hwang-Fun; Mcdonald, Joseph J. PCT Int. Appl., 68 pp. CODEN: PIXXD2
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	CA	2236	236			λÀ		1997	0522		CA 1	996-	2236	236		1	9961	113	
	AU	9677	222			A1		1997	0605		AU 1	996-	7722	2		1	9961	113	
	EP	8612	49			A1		1998	0902		EP 1	996-	9403	02		1:	9961	113	
		R:	AT,	BE,	CH,	DE,	DK,	ES,	FR,	GB,	GR,	IT.	LI,	LU.	NL,	SE.	PT.	IE.	FI
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AB RSSOt(CH2) nC(:W)NHCHR2CH(OH)CH2NR3SO2R4 [1; R1 = H, (un) substituted alkyl, alkenyl, etc.; R2 = (ar)alkyl, alkylthioalkyl, arythioalkyl, etc.; R3 = (cyclo)alkyl, cycloalkylalkyl, etc.; R5 = heterocycly[alkyl], (heterolaryl[alkyl], etc.; W = 0 or S; n,t = 0-2] were prepared Thum, (2R, 3S) = hCH2O2CCHCH(CH2Ph) CH(OH)CH2NHCH2CH942 (preparation given) was anidated by enazodioxole-5-sulfonyl chloride and the deprotacted product anidated by (S)-AcSCHZCH4CO2H to give, after deprotaction, sulfonanide II (R = SH). The latter was S-alkylated by 2-(2-chlorocthyl) pyridine (preparation given) and the product oxidized to give II (R = 2-(2-yyridyl)athylsulfonyl). Data for biol. activity of I were given.

II Blala-8-8-8

RL: BAC (Biological activity or effector, except adverse); BSU (Biological

ANSWER 14 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued) study, unclassified), RCT (Reactant), SPN (Synthetic preparation), THU (Therapeutic use), BIOL (Biological study), PRDE (Preparation), RACT (Reactant or reagent), USES (Uses) (prepn. of N-[2-hydroxy-4-phenyl-3-(sulfonylalkanoylamino)butyl]arylsul fonanides and analogs as retroviral protease inhibitors)
191413-54-4 CAPLUS

lileij-54-4 CAPLUS
1-Pyrrolidinecarboxylic acid, 2-[[[2S]-3-[{[1S,2R]-3-[(1,3-benzodioxol-S-ylsulfonyl](2-methylpropyl]amino]-2-hydroxy-1-[phenylmethyl]propyl]amino]-2-methyl-3-oxopropyl]sulfonyl]methyl]-, phenylmethyl ester, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

17 174303-66-3P 183004-74-2P 183004-77-5P 183182-29-8P 191412-75-6P 191412-76-7P 191412-77-8P 191412-75-6P 191412-75-6P 191412-78-9-0P 191412-83-6P 191412-81-9-1P 191412-82-5P 191412-83-6P 191412-81-9P 191412-81-9P 191412-81-9P 191412-81-9P 191412-81-9P 191412-81-9P 191412-81-9P 191412-91-9P 191413-01-9P 191413-01-9P 191413-01-9P 191413-01-9P 191413-01-9P 191413-01-9P 191413-01-9P 191413-11-9P 191413-11-9P 191413-19-9P 191413-19-9P 191413-20-4P 191413-12-9P 191413-19-9P 191413-20-4P 191413-30-9P 191413-30-9P 191413-34-9P 191413-34-9P 191413-34-9P 191413-34-9P 191413-35-9P 191413-36-9P 191413-35-9P 191413-36-9P 191413-35-9P 191413-36-9P 191413-57-9P 191413-35-9P 191413-56-9P 191413-57-9P 191413-58-9P 191413-58-9P 191413-56-9P 191413-58-9P 191413-58-9P 191413-66-9P 191413-76-9P 191413-76-9

ANSWER 14 OF 19 CAPJUS COPYRIGHT 2005 ACS on STN (Continued) Propansmide, N=([15,2R]-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)aminol-2-hydroxy-1-(phenylmethyl)propyl)-2-methyl-3-[(S)-methylsulfinyl)-, (2S)- [9CI) (CA INDEX NAME)

Absolute stereochemistry.

191412-75-6 CAPLUS
Propanamide, N-[(15,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)aminol-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[(2-(2-pyridinyl)ethyl)sulfonyl]-, (25)- (9CI) (CA INDEX NAME)

191412-76-7 CAPLUS
Propanamide, N-[(15,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)amino|-2-hydroxy-1-(phenylmethyl)propyl)-2-methyl-3-[[2-[(2-(1-oxido-1-pyrrolidinyl)ethyl)amino|-2-oxoethyl]sulfonyl]-, (2S)- (9CI)(CA INDEX NAME)

Absolute stereochemistry.

RN CN

191412-77-8 CAPLUS
Propanamide, N-[(1,3,2R)-3-[(1,3-benrodioxol-5-ylsulfonyl)(2-methylropyl)amino]-2-hydroxy-1-[phenylmethyl)propyl]-2-methyl-3-[[3-oxo-3-(1-piperaxinyl)propyl]sulfonyl]-, menohydrochloride, (25)- [9CI) (CA INDEX NAME)

- L4 ANSWER 14 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued) fonamides and analogs as retroviral protease inhibitors)
 RN 174303-66-3 CAPLUS
 Propananide, N-[(15, 28)-3-[(1, 3-benzodioxol-5-ylsulfonyl)(2-methylpropyl) aninol-2-hydroxyl-(phenylmethyl)propyl]-2-methyl-3-(methylsulfonyl)-, (28)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

183004-74-2 CAPLUS
Propanamide, N=[(15,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[(R)-methylsulfinyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

183004-77-5 CAPLUS
Propanamide, N=[(15,2R)-3-[[(2-amino-6-benzothiazolyl)sulfonyl](2-methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-(methylsulfonyl)-, (2S)- (9CI) (CA INDEX NAME)

183182-29-8 CAPLUS

L4 ANSWER 14 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

Absolute stereochemistry.

• HCl

191412-78-9 CAPLUS
Propanamide, N-[(15,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl) (2-methylpropyl) amino|-2-hydroxy-1-(phenylmethyl) propyl]-2-methyl-3-[[2-[(2-(4-oxido-4-morpholinyl)ethyl]amino]-2-oxoethyl}sulfonyl]-, (2S)- (9CI)

Absolute stereochemistry.

191412-79-0 CAPLUS
Propananide, N-{(18,2R)-3-{(1,3-benzodioxol-5-ylsulfonyl)(2-methylropyl)aminoj-2-bydroxy-1-(phenylmethylr)propyl]-2-methyl-3-{[2-(4-morpholinyl)-2-oxoethyl]sulfonyl]-, (2S)- (9CI) (CA INDEX NAME)

191412-80-3 CAPLUS
Propananide, N-[(15,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)anino|-2-hydroxy-1-(phenylmethyl)propyl)-2-methyl-3-{[2-oxo-2-(1-piperszinyl)ethyl]sulfonyl]-, monohydrochloride, (25)- (9CI) (CA INDEX

ANSWER 14 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN NAME) L4 (Continued)

Absolute stereochemistry.

• HC1

191412-81-4 CAPLUS
Propanamide, N-[(15,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)amino|-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[(2-oxo-2-phenylethyl)sulfonyl]-, (25)- (9CI) (CA INDEX NAME)

191412-82-5 CAPLUS Propanamide, N-{(15,2R)-3-{(1,3-benzodioxol-5-ylsulfonyl)}(2-methylpropyl) aminoj-2-hydroxy-1-{phenylmethyl}propyl]-3-{(2-(1,1-dioxido-4-thiomorpholinyl)-2-oxoethyl]sulfonyl]-2-methyl-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

191412-83-6 CAPLUS
Butanoic acid, 4-[[(2S)-3-{[(1S,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-

ANSWER 14 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

 $\begin{array}{lll} 191412-87-0 & CAPLUS \\ Propanamide, & 3-{\{1H-benzimidazo1-2-ylmethyl\}} & sulfonyl]-N-{\{1S,2R\}-3-{\{1,3-benzodixo1-5-ylsulfonyl\}}(2-methyl)propyl\}} & anino]-2-hydroxy-1-{\{phenylmethyl\}propyl}-2-methyl-, (2S)-{\{9CI\}} & (CA INDEX NAME) \\ \end{array}$

Absolute stereochemistry.

191412-88-1 CAPLUS
Propanamide, N-[(15,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)amino|-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[(5-thiazolylmethyl)sulfonyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry

191412-89-2 CAPLUS
Propanamide, N-{ (15,2R)-3-{(1,3-benzodioxol-5-ylsulfonyl) (2-methylpropyl) amino|-2-hydroxy-1-(phenylmethyl)propyl)-2-methyl-3-{[(25)-2-pyrrolidinylmethyl]sulfonyl]-, (25)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L4 ANSWER 14 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)
methylpropyl) aminoj-2-hydroxy-1-(phenylmethyl)propyl] aminoj-2-methyl-3oxopropyl]thioj-, ethyl ester (SCI) (CA INDEX NAME)

Absolute stereochemistry.

191412-84-7 CAPLUS
Propanamide, N-[(15,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)amino|-2-hydroxy-1-(phenylmethyl)propyl]-3-[(1H-imidazol-4-ylmethyl)sulfonyl]-2-methyl-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

191412-85-8 CAPLUS
Propanamide, N-[(15,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)amino|-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[(1H-pyrazol-3-ylmethyl)sulfonyl]-, (2S)- (9CI) (CA INDEX NAME)

191412-86-9 CAPLUS
Propanamide, N-[(15,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl) amino|-2-hydroxy-1-(phenylmethyl)propyl)-2-methyl-3-[(H-pyrazol-4-ylmethyl)sulfonyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

ANSWER 14 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued) Propananide, N-([15,2R)-3-[(1,3-benzodioxol-5-ylaulfonyl) (2-methylpropyl)anino)-2-hydroxy-1-(phenylmethylpropyl)-2-methyl-3-[{(2R)-2-pyrrolidinylmethyl]sulfonyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry

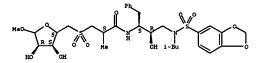
191412-91-6 CAPLUS
Propanamide, N-[(15,2R)-3-{(1,3-benzodioxol-5-ylsulfonyl)}(2-methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-(2-pyridinylsulfonyl)-, (25)- (9CI) (CA INDEX NAME)

191412-92-7 CAPLUS
Propanamide, N-[(15,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)aminol-2-hydroxy-1-(phenylmethyl)propyl]-3-[[3-hydroxy-2-(hydroxymethyl)propyl]sulfonyl]-2-methyl-, (25)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

191412-93-8 CAPLUS
D-Ribofuranoside, methyl 5-{{(25)-3-{[(15,2R)-3-{[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)amino}-2-hydroxy-1-(phenylmethyl)propyl]amino}-2-methyl-3-oxopropyl]sulfonyl]-5-deoxy- (9Cl) (CA INDEX NAME)

L4 ANSWER 14 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



RN 191412-94-9 CAPLUS
CN Propananide, N-[(15, 2R)-3-[(1,3-benzodioxo1-5-ylsulfonyl) (2methylpropyl) minol-2-hydroxy-1-(phenylmethyl)propyl)-3-[(3-hydroxy-2,2bis(hydroxymethyl)propyl)sulfonyl}-2-methyl-, (25)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 191412-95-0 CAPLUS
Propanamide, N-[[15,2R]-3-[[1,3-benzodioxol-5-ylsulfonyl) (2-methylpropyl) annio]-2-hydroxy-1-(phenylmethyl) propyl)-2-methyl-3-[[2-oxo-2-(2-pyridinyl)ethyl]sulfonyl]-, (25)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

EN 191412-96-1 CAPLUS
Propanamide, N-[(15,2R)-3-[((2,3-dihydro-1,4-benzodioxin-6-yl)sulfonyl)(2-sethylpropyl)sulfonyl)sulfonyl-1-(phenylmethyl)propyl)-2-sethyl-3-[(2-oxo-2-(2-pyridinyl)ethyl)sulfonyl]-, (25)- (9CI) (CA INDEX NAME)

Absolute stereochemistru

L4 ANSWER 14 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

RN 191413-01-1 CAPLUS
Propanamide, N-[(1S,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)aminoj-2-hydroxy-1-(phenylmethyl)propyl)-2-methyl-3-[[2-oxo-2-(3-pyridinyl)ethyl]sulfonyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 191413-02-2 CAPLUS
Propananide, N-[(15,2R)-3-[[(2,3-dihydro-1,4-benzodioxin-6-yl)sulfonyl](2-methylpropyl)anino]-2-hydroxy-1-(phenylnethyl)propyl)-2-methyl-3-[[2-oxo-2-(3-pyridinyl)ethyl]sulfonyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 191413-03-3 CAPLUS

Propanamide, N-[(1S,2R)-3-[(6-benzothiazolylsulfonyl)(2-methylpropyl)anino]-2-bydroxy-1-(phenylmethyl)propyl)-2-methyl-3-[(2-oxo-2-(3-pyridinyl)ethyl]sulfonyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L4 ANSWER 14 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

RN 191412-97-2 CAPLUS
CN Propanamide, N-[(15,2R)-3-[(6-benzothiazolylsulfonyl)(2methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[(2-oxo-2(2-pyridinyl)ethyl]sulfonyl]-, (25)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 191412-99-4 CAPLUS
CN Propanamide, N-{(15,2R)-3-[(5-benzothiazolylsulfonyl) (2-methylpropyl)amiol-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[[2-oxo-2-(2-pyridinyl)ethyl]sulfonyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 191413-00-0 CAPLUS
Propanamide, N-[(15,2R)-3-[{(2,3-dihydro-5-benzofuranyl)sulfonyl](2-methylpropyl)aninoj-2-bydroxy-1-[phenylmethyl]propyl]-2-methyl-3-[[2-oxo-2-(2-pyridinyl)ethyl]sulfonyl]-, (25) {9Cl} (CA INDEX NAME)

Absolute stereochemistry.

L4 ANSWER 14 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)
CN Propanamide, N-[(15,2R)-3-[(5-benzothiazolylsulfonyl) (2methylpropyl) annol-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[[2-oxo-2(3-pyridinyl)ethyl]sulfonyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry

RN 191413-05-5 CAPLUS
Propanamide, N-{(15,2R)-3-[{(2,3-dihydro-5-benzofurany1)sulfony1}{(2-methylpropy1)amino|-2-hydroxy-1-(phenylmethyl)propy1]-2-methyl-3-[[2-oxo-2-(3-pyridiny1)ethyl]sulfony1]-, (25) - (9C1) (CA INDEX NAME)

Absolute stereochemistry.

RN 191413-06-6 CAPLUS
CN Propanamide, N-[(15,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-nethylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[[2-oxo-2-(4-pyridinyl)ethyl]sulfonyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 191413-07-7 CAPLUS
CN Propananide, N-[(15, 2R)-3-[[(2,3-dihydro-1,4-benzodioxin-6-yl)sulfonyl](2-methylpropyl)anino]-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[[2-oxo-2-(4-pyridinyl)ethyl]sulfonyl]-, (25) (9CI) (CA INDEX NAME)

L4 ANSWER 14 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

RN 191413-08-8 CAPLUS
Propananide, N-[(1S,2R)-3-[(6-benzothiszolylsulfonyl)(2methylpropyl) minoj-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[[2-oxo-2(4-pyridinyl)ethyl]sulfonyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 191413-09-9 CAPLUS
Propanamide, N-[(15,2R)-3-[(5-benzothiazolylsulfonyl)(2mathylpropyl) anio]-2-hydroxy-1-(phenylmathyl)propyl]-2-mathyl-3-[[2-oxo-2(4-pyridinyl)ethyl]sulfonyl]-, (25)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 191413-10-2 CAPLUS
Propananide, N-[(15,2R)-3-[[(2,3-dihydro-5-benzofurany1)sulfony1](2methylpropyl)anino]-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[[2-oxo-2(4-pyridinyl)ethyl]sulfonyl]-, (25)- (9CI) (CA INDEX NAME)

Absolute stereochemistry

L4 ANSWER 14 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

RN 191413-14-6 CAPLUS

Propananide, N-[(15,2R)-3-[((2,3-dihydro-5-benzofuranyl)sulfonyl](2-methylpropyl)anio)-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[(lH-pyrazol-3-ylmethyl)sulfonyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 191413-15-7 CAPLUS Propananide, N-[(15,2R)-3-[[(2,3-dihydro-1,4-benzodioxin-6-yl)sulfonyl](2-methylpropyl)anino]-2-bydroxy-1-(phenylmethyl)propyl)-2-methyl-3-[(2-oxo-2-phenylethyl)sulfonyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 191413-16-8 CAPLUS
Propanamide, N-[(15,2R)-3-[(6-benzothiazolylsulfonyl)(2-methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl)-2-methyl-3-[(2-oxo-2-phenylethyl)sulfonyl]-, (25)- [9C1) (CA INDEX NAME)

Absolute stereochemistry.

L4 ANSWER 14 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

RN 191413-11-3 CAPLUS
CN Propanamie N-[(15,2R)-3-[((2,3-dibydro-1,4-benzodioxin-6-y1)sulfonyl)(2methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl)-2-methyl-3-[(Hrpyrazol-3-ylmethyl)sulfonyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistms

RN 191413-12-4 CAPLUS
CN Propanaside, N={(15, ZR)-3-{(6-benzothiazolylsulfonyl) (2nethylpropyl) anion}-2-hydroxy-1-(phenylmethyl)propyl]-2-nethyl-3-[(1Hpyrazol-3-ylmethyl)sulfonyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 191413-13-5 CAPLUS
Propananide, N-[(1S,2R)-3-[(5-benzothiezolylsulfonyl)(2-methylpropyl)anino]-2-bydroxy-1-(phenylmethyl)propyl]-2-methyl-3-{(1H-pyrazol-3-ylmethyl)sulfonyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L4 ANSWER 14 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

RN 191413-17-9 CAPLUS
CN Propanamide, N-[(15,2R)-3-[(5-benzothiazolylsulfonyl)(2-methylpropyl) amino]-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[(2-oxo-2-phenylethyl)sulfonyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 191413-18-0 CAPLUS
Propanamide, N-[(15,2R)-3-[((2,3-dihydro-5-benzofuranyl)sulfonyl](2-methylpropyl)aminoj-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[(2-oxo-2-phenylethyl)sulfonyl]-, (2S)- [9CI] (CA INDEX NAME)

Absolute stereochemistry.

RN 191413-19-1 CAPLUS
CN Propananide, N-{(15,2R)-3-{{(2,3-dihydro-1,4-benzodioxin-6-y1)sulfony1}(2-nethylpropyl)sainol-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-{(5-thiarolylmethyl)sulfonyl]-, (25)- (9CI) (CA INDEX NAME)

L4 ANSWER 14 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

191413-20-4 CAPLUS
Propanamide, N-[(15,2R)-3-[(6-benzothiszolylsulfonyl) (2-methylpropyl) amino]-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[(5-thiszolylmethyl)sulfonyl]-, (25)- (9C1) (CA INDEX NAME)

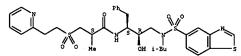
Absolute stereochemistry.

191413-22-6 CAPLUS
Propanamide, N-[(15,2R)-3-[(5-benzothiazolylsulfonyl)(2-methylpropyl)amino|-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[(5-thiazolylmethyl)sulfonyl]-, (2S)- (9CI) (CA INDEX NAME)

191413-24-8 CAPLUS
Propanamide, N-[(15,2R)-3-[[(2,3-dihydro-5-benzofuranyl)sulfonyl](2-methylpropyl)amino|-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[(5-thiazolylmethyl)sulfonyl]-, (25)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

ANSWER 14 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



 $\begin{array}{lll} 191413-34-0 & CAPLUS \\ Propanamide, & N-[(15,2R)-3-[[(2,3-dihydro-5-benzofuranyl)sulfonyl](2-methylropyl)amino|-2-hydroxy-1-(phenylmethyll)propyl]-2-methyl-3-[[2-(2-pyridinyl)ethyl]sulfonyl]-, (2S)- (9CI) & (CA INDEX NAME) \\ \end{array}$

Absolute stereochemistry.

191413-36-2 CAPLUS Propanamide, N-[(15,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)aminol-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[[2-(3-pyridinyl)ethyl]sulfonyl]-, (25)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

191413-38-4 CAPLUS
Propanamide, N-[(15,2R)-3-[((2,3-dihydro-1,4-benzodioxin-6-yl)sulfonyl](2-methylpropyl)amino|-2-bydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[[2-(3-pyridinyl)ethyl]sulfonyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L4 ANSWER 14 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

191413-26-0 CAPLUS
Propanamide, N={[15,2R}-3-[[(2,3-dihydro-1,4-benzodioxin-6-yl)sulfonyl](2-methylpropyl)amino|-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[[2-(2-pyridinyl)ethyl]sulfonyl]-, (2S)- (9CI) (CA INDEX NAME)

191413-29-3 CAPLUS
Propanamide, N-[(15,2R)-3-{(6-benzothiazolylsulfonyl) (2-methylpropyl) amino]-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[[2-(2-pyridinyl)ethyl]sulfonyl]-, (25)- (9CI) (CA INDEX NAME)

191413-31-7 CAPLUS
Propananide, N-[(15,2R)-3-[(5-benzothiazolylaulfonyl)(2-methylropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[[2-(2-pyridinyl)ethyl]aulfonyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

ANSWER 14 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued) Propanamide, N-[(15,2R)-3-[(6-benzothiazolylaulfonyl)(2-methylpropyl)amino)-2-hydroxyr-1-(phenylmethyl)propyl]-2-methyl-3-[[2-(3-pyridinyl)ethyl]sulfonyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

191413-43-1 CAPLUS
Propananida, N-[(15,2R)-3-[(5-benzothiazolylaulfonyl)(2-methylropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[[2-(3-pyridinyl)ethyl]aulfonyl]-, (25)- (9CI) (CA INDEX NAME)

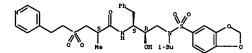
Absolute stereochemistry.

191413-45-3 CAPLUS Propanamide, N-{(15,2R)-3-{((2,3-dihydro-5-benzofuranyl)sulfonyl){2-methylpropyl}amino|-2-hydroxy-1-(phenylmethyl)propyl}-2-methyl-3-{(2-(3-pyridinyl)ethyl]sulfonyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

191413-47-5 CAPLUS
Propanamide, N-[(15,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)amino)-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[[2-(4-pyridinyl)ethyl]sulfonyl]-, (25)- (9CI) (CA INDEX NAME)

L4 ANSWER 14 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



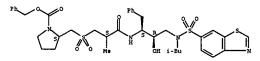
191413-49-7 CAPLUS
Propanamide, N-{ [15,2R}-3-[{(2,3-dihydro-1,4-benzodioxin-6-yl]sulfonyl}{2-methylpropyl}amino|-2-hydroxy-1-(phenylmethyl)propyl}-2-methyl-3-[{2-(4-pyridinyl)ethyl}sulfonyl]-, (2S)- (9CI) (CA INDEX NAME)

191413-50-0 CAPLUS
Propanamide, N-[(15,2R)-3-[(6-benzothiszolylsulfonyl)(2-methylpropyl)amino|-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[[2-(4-pyridinyl)ethyl]sulfonyl]-, (2S)- (9CI) (CA INDEX NAME)

191413-51-1 CAPLUS
Propanamide, N-[(15,2R)-3-((5-benzothiazolylsulfonyl)(2-methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[[2-(4-pyridinyl)ethyl]sulfonyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L4 ANSWER 14 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



191413-58-8 CAPLUS
1-Pyrrolidinecarboxylic acid, 2-{[[(25)-3-[[(15,2R)-3-[(5-benzothiazolylsulfonyl)(2-methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl)amino]-2-methyl-3-oxporpoyl)sulfonyl]methyl}-, phenylmethyl ester, (25)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

191413-61-3 CAPLUS
1-Pyrrolidinecarboxylic acid, 2-[[[(2S)-3-[[(1S,2R)-3-[((2,3-dihydro-5-benzofuranyl)aulfonyl)(2-methylpropyl)anino]-2-hydroxy-1-(phenylmethyl)propyl)amino]-2-methyl-3-oxopropyl]aulfonyl]methyl)-, phenylmethyl ester, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

191413-62-4 CAPLUS
Propanamida, N-[(18, 2R)-3-[(1, 3-benzodioxol-5-ylsulfonyl) (2-methylpropyl) amino]-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[[3-oxo-3-(1-piperazinyl)propyl]sulfonyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L4 ANSWER 14 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN

191413-53-3 CAPLUS
Propanamide, N=[[15,ZR]-3-[[(2,3-dibydro-5-benzofuranyl)sulfonyl](2-methylpropyl)amino|-2-hydroxy-1-(phenylmethyl)propyl}-2-methyl-3-[[2-(4-pyridinyl)ethyl]sulfonyl]-, (25)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

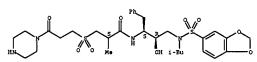
191413-56-6 CAPLUS
1-Pyrrolidinecarboxylic acid, 2-[[[(2S)-3-[[(1S,2R)-3-[[(2,3-dihydro-1,4-benzodloxin-6-yl]sulfonyl](2-methyl)propyl) amino]-2-hydroxy-1(phenylmethyl)propyl) amino]-2-methyl-3-oxopropyl]sulfonyl]methyl]-,
phenylmethyl ester, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

191413-57-7 CAPLUS
1-Pyrrolidinecarboxylic acid, 2-[[[(2S)-3-[[(1S,2R)-3-[(6-benzothizzotylzulfonyl) (2-methylpropyl) amino)-2-hydroxy-1-(phenylmethyl)propyl)amino]-2-methyl-3-oxopropyl]sulfonyl]methyl]-, phenylmethyl ester, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

ANSWER 14 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



Absolute stereochemistry.

191413-65-7 CAPLUS
Propanamide, N-[(15,2R)-3-[(6-benzothiszolylsulfonyl)(2-methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[[3-oxo-3-(1-piperszinyl)propyl]sulfonyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

191413-66-8 CAPLUS
Propananide, N-[(15,2R)-3-[(5-benzothiazolylsulfonyl)(2-methyl-propyl)anino]-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[[3-oxo-3-(1-piperazinyl)propyl]sulfonyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

191413-67-9 CAPLUS

L4 ANSWER 14 OF 19 -CAPLUS COPYRIGHT 2005 ACS on STN (Continued)
CN Propanamide, N-{(15,2R)-3-{(2,3-dibydro-5-benzofuranyl)sulfonyl){2methylpropyl)amino|-2-bydroxyl-+(phenylmethyl)propyl)-2-methyl-3-{(3-oxo-3(1-piperazinyl)propyl)sulfonyl)-, (25)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 191413-68-0 CAPLUS
CN Propanamide, 3-[[3-[{2-aminoethyl)amino]-3-oxopropyl]sulfonyl}-N-[(15,2R)3-[(1,3-benzodioxod)-5-ylsulfonyl)(2-methylpropyl)amino]-2-hydroxy-1(phenylmethyl)propyl]-2-methyl-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 191413-69-1 CAPLUS
CN Propanamide, 3-[[3-([2-aminosthyl)amino]-3-oxopropyl]sulfonyl]-N-[(15,2R)-3-[[(2,3-dihydro-1,4-benzodioxin-6-yl)sulfonyl](2-methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 191413-70-4 CAPLUS
Propanamide, 3-[[3-{(2-aminoethyl) amino]-3-oxopropyl]sulfonyl]-N-[(1s,2R)-3-((5-benzothiazolylsulfonyl) (2-methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-, (2s)- (9Cl) (CA INDEX NAME)

L4 ANSWER 14 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

RN 191413-75-9 CAPLUS
CN Propanamide, N-[(15,2R)-3-[(6-benzothiazolylsulfonyl)(2-methylpropyl)anion)-2-hydroxy-1-(phenylmethyl)propyl)-3-[[3-hydroxy-2-(hydroxymethyl)propyl]sulfonyl]-2-methyl-, (2S)- (9Cl) (CA INDEX NAME)

Absolute stereochemistry.

RN 191413-77-1 CAPLUS
CN Propanamide, N-[(15,2R)-3-[(5-benzothiazolylsulfonyl)(2methylpropyl) amiol-2-hydroxy-1-(phenylmethyl)propyl]-3-[(3-hydroxy-2(hydroxymethyl)propyl]sulfonyl]-2-methyl-, (25)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 191413-79-3 CAPLUS
CN Propanamide, N-[(15,2R)-3-[((2,3-dihydro-5-benzofuranyl)sulfonyl](2-nethylpropyl)amiol-2-hydroxy-1-(phenylmethyl)propyl)-3-[(3-hydroxy-2-(hydroxymethyl)propyl)sulfonyl]-2-methyl-, (25)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L4 ANSWER 14 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued) Absolute stereochemistry.

IN 191413-71-5 CAPLUS
IN Propansmide, 3-[(3-[(2-aminoethyl) amino]-3-oxopropyl]sulfonyl]-N-[(15,2R)-3-[(5-benzothiszolylsulfonyl)](2-methylpropyl)amino]-2-bydroxy-1(phenylnethyl)propyl]-2-methyl-, (25)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 191413-72-6 CAPLUS
Propanamide, 3-[(3-[(2-aminoethyl) amino]-3-oxopropyl) sulfonyl]-N-[(15,2R)-3-[([2,3-dihydro-5-benzofuranyl) sulfonyl] (2-methylpropyl) amino]-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

$$\begin{array}{c|c} H_2N & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & \\ & & & \\ & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ &$$

RN 191413-73-7 CAPLUS
CN Propanamide, N=[(15,2R)-3-[([2,3-dihydro-1,4-benzodioxin-6-y1)sulfonyl](2-metbyl)propyl] anino]-2-hydroxy-1-(phenylmethyl)propyl]-3-[(3-hydroxy-2-(hydroxymethyl)propyl]sulfonyl]-2-methyl-, (25)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L4 ANSWER 14 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

RN 191413-82-8 CAPLUS
Propanamide, N-[(15,2R)-3-[((2,3-dihydro-1,4-benzodioxin-6-y1)sulfonyl](2-methylpropyl) aninoj-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[[(2R)-2-pyrrolidinylmethyl)sulfonyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 191413-84-0 CAPLUS
CN Propanaside, N-[(15,2R)-3-[(6-benzothiazolylsulfonyl)(2methylpropyl)anio|-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[[(2R)-2pyrrolidinylmethyl]sulfonyl]-, (2S)- (9Cl) (CA INDEX NAME)

Absolute stereochemistry

RN 191413-86-2 CAPLUS
CN Propanaside, N-{(15,2R)-3-{(5-benzothiazolylsulfonyl)(2-methylpropyl)aniol-2-hydroxy-1-(phenylmethyl)propyl)-2-methyl-3-{((2R)-2-pyrrolidinylmethyl)sulfonyl)-, (2S)- (9CI) (CA INDEX NAME)

L4 ANSWER 14 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

191413-88-4 CAPLUS
Propanamide, N-[(15,2R)-3-[(2,3-dihydro-5-benzofurany1)sulfony1](2-methylpropy1)anino)-2-bydroxy-1-(phenylmethy1)propy1]-2-methyl-3-[(2R)-2-pyrrolidinylmethy1]sulfony1}-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

II 183004-99-1P 183005-01-8P 191413-92-0P
191413-94-2P 191413-98-6P 191414-00-3P
191414-06-9P 191414-07-9P 191414-08-1P
191414-06-9P 191414-07-9P 191414-08-1P
191414-06-9P 191414-10-5P 191414-11-6P
191414-12-7P 191414-12-8P 191414-11-6P
191414-12-7P 191414-21-8P 191414-28-P
191414-26-3P 191414-27-9P 191414-28-P
191414-26-3P 191414-27-9P 191414-28-P
191414-26-3P 191414-27-9P 191414-28-P
191405-19-8P 191405-20-1P
RL: RCT (Reactant), SPN (Synthetic preparation), PREP (Preparation), RACT (Reactant or respent)
(preparation of
N-[2-hydroxy-4-phenyl-3-(sulfonylalkandylamino)butyl) arylsul
fonamides and analogs as retroviral protease inhibitors)
RN 183004-99-1 CAPLUS
CN Ethanethicid seid, S-[(2S)-3-[(1S, 2R)-3-[(1, 3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl]amino]-2-methyl-3oxopropyl) seter (SCI) (CA INDEX NAME)

Absolute stereochemistry.

183005-01-8 CAPLUS
Propanamide, N={[15,2R]-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-(methylbhio)-, (25)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

ANSWER 14 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued) PAGE 1-A

PAGE 1-B

191414-00-3 CAPLUS
1-Piperazinecarboxylic acid, 4-[3-[{(2S)-3-[[(1S,2R)-3-[(1,3-benzodioxol-5-yleulfonyl)(2-methylpropyl)amino]-2-hydroxy-1-[phenylmethyl]propyl]amino]-2-methyl-3-oxopropyl]sulfonyl]-1-oxopropyl}-, 1,1-dimethylethyl ester
(9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-B

191414-02-5 CAPLUS Propanamide, N-[3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)amino]-2-

L4 ANSWER 14 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

191413-92-0 CAPLUS
Propananide, N-[(15,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylropyl)anino|-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[[2-(2-pyridinyl)ethyl]thio]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

191413-94-2 CAPLUS
Propanamide, N-[(15,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl}-2-methyl-3-[(2-oxo-2-[(2-(1-pyrrolidinyl)ethyl)amino]ethyl]thio]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

191413-98-6 CAPLUS
1-Piperazinecarboxylic acid, 4-[3-[[(25)-3-[[(15,2R)-3-[(1,3-benzodioxol-5-yisulfonyl)(2-methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl)amino]-2-methyl-3-oxopropyl]thio]-1-oxopropyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

ANSWER 14 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued) hydroxy-1-(phenylmethyl) propyl]-2-methyl-3-[[2-([2-(4-oxt.do-4-oxt.

Absolute stereochemistry

191414-04-7 CAPLUS
Propanamide, N=[(15,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)amino)-2-bydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[[2-(4-morpholinyl)-2-oxoethyl]thio]-, (2S)- (9CI) (CA INDEX NAME)

191414-05-8 CAPLUS
1-Piperazinecarboxylic acid, 4-([(2S)-3-[((1S,2R)-3-[(1,3-benzodioxol-5-yleulfonyl)(2-methylpropyl)amino]-2-hydroxy-i-(phenylmethyl)propyl)amino]-2-methyl-3-oxopropyl]thio]acetyl]-, 1,1-dimethylethyl ester [9CI) (CA

L4 ANSWER 14 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN

(Continued)

PAGE 1-R

1.-Piperazinecarboylic acid, 4-[[[(25)-3-[[(15,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl](2-methylpropyl)anino]-2-hydroxy-1-(phenylmethyl)propyl)anino]-2-methyl-3-oxopropyl]sulfonyl)acetyl|-, 1,1-dimethylethyl ester (SCI) (CA

Absolute stereochemistry.

PAGE 1-B

191414-07-0 CAPLUS
Propanamide, N-([15,2R]-3-[[1,3-benzodioxol-5-ylsulfonyl) {2-methylpropyl}aninol-2-hydroxy-1-(phenylmethyl)propyl}-2-methyl-3-[(2-oxo-2-phenylethyl)thio]-, (25)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

ANSWER 14 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

191414-11-6 CAPLUS
Propanamide, N-[(1S,2R)-3-[(1,3-benzodicxol-5-ylsulfonyl)(2-methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[(lH-pyrazol-4-ylmethyl)thio]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry,

191414-12-7 CAPLUS
Propanamide, 3-((lH-benzimidazol-2-ylmethyl)thio]-N-((ls,2R)-3-[(l,3-benzodixocl-5-ylsulfonyl)(2-methyl)propyl)amino]-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

191414-13-8 CAPLUS
Propanamide, N-[(1S,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)aminol-2-hydroxy-1-(phenylmethyl)propyl)-2-methyl-3-[(5-thiazolylmethyl)thio]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

191414-15-0 CAPLUS

L4 ANSWER 14 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

191414-08-1 CAPLUS
Propanamide, N-{3-{(1,3-benzodioxol-5-yisulfonyl) (2-mathylpropyl) amino}-2-hydroxy-1-(phenylmethyl)propyl}-3-{(2-(1,1-dioxido-4-thiomorpholinyl)-2-oxoethyl]thio}-2-methyl-, [1S-{1R*(R*),2S*}}- (SCI) (CA INDEX NAME)

Absolute stereochemistry.

191414-09-2 CAPLUS Propanamide, N-[(1S, 2R)-3-[(1,3-benzodioxol-5-ylsulfonyl) (2-methylpropyl) aminol-2-hydroxy-1-(phenylmethyl) propyl]-3-[(lH-imidezol-4-ylmethyl) thio)-2-methyl-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

191414-10-5 CAPLUS
Propanamide, N-[(15,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)amino|-2-hydroxy-1-(phenylmethyl)propyl)-2-methyl-3-[(lH-pyrazol-3-ylmethyl)thio]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

ANSWER 14 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)
1-Pyrrolidinecarboxylic acid, 2-{[[(2S]-3-[([1S,2R)-3-[(1S,3-benzodioxol-5-ylsulfony])(2-methylpropyl)aminol)-2-hydroxyl-i-(phenyl)methyl)propyl aminol-2-bydroxyl-i-(phenylmethyl)-2-methyl-3-oxopropyl)thio]methyl]-, phenylmethyl ester, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry

191414-18-3 CAPLUS
1-Pyrrolidinecarboxylic acid, 2-[[(2S)-3-[((1S,2R)-3-((1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)amino]-2-nethyl-3-oxopropyl}thio]methyl]-, phenylmethyl ester, (2R)- (9CI) (CA

Absolute stereochemistry.

191414-21-8 CAPLUS
1-Pyrrolidinecarboxylic acid, 2-[[[(2S)-3-[[(1S,2R)-3-[(1,3-benzodioxol-5-yleulfonyl)(2-methylpropyl)emino]-2-bydroxy-1-(phenylmethyl)propyl)emino]-2-methyl-3-oxopropyl)sulfonyl]methyl]-, phenylmethyl ester, (2R)- (SCI) (CA INDEX NAME)

Absolute stereochemistry.

191414-24-1 CAPLUS
Propananide, N-[(15,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)anino]-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-(2-pyridinylthio)-, (2S)- (9CI) (CA INDEX NAME)

L4 ANSWER 14 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

191414-26-3 CAPLUS
D-Ribofuranoside, methyl 5-5-[(2S)-3-[[(1S,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl)amino]-2-methyl-3-oxopropyl)-2,3-0-(1-methylethylidene)-5-thio-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-B

191414-27-4 CAPLUS
D-Ribofuranoside, methyl 5-[[(2S)-3-[[(1S,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)amino]-2-hydroxy-1-{phenylmethyl)propyl]amino]-2-methyl-3-oxopropyl]sulfonyl]-5-deoxy-2,3-0-(1-methylethylidene)- (9CI)(CA INDEX NAME)

Absolute stereochemistry.

ANSWER 14 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

 $\begin{array}{lll} 191486-20-1 & CAPLUS \\ Propanamide, & N-[3-[(1,3-benzodioxol-5-ylsulfonyl) (2-methylpropyl)amino]-2-hydroxyl-1 (phenylmethyl)propyl]-2-methyl-3-[((2-phenyl-1,3-dioxan-5-yl)methyl]sulfonyl]-, [5[S(15,2R)]]-[partial]- (9CI) & (CA INDEX NAME) \\ \end{array}$

Absolute stereochemistry.

L4 ANSWER 14 OF 19 CAPLUS COPYRIGHT 2005 ACS OD STN (Continued)

PAGE 1-A

PAGE 1-B

191414-28-5 CAPLUS
Propanamide, N-[(18,2R)-3-((1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl]-3-[[3-hydroxy-2,2-bis(hydroxymethyl)propyl]thio]-2-methyl-, (25)- (9CI) (CA INDEX NAME)

191486-19-8 CAPLUS Propanamide, N-[3-[(1,3-benzodioxol-5-ylsulfonyl) (2-methylpropyl) amino]-2-bydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[[(2-phenyl-1,3-dioxan-5-yl)methyl]thio]-, [5[s(15,2R)]]-[partial]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

ANSWER 15 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
1997:8904 CAPLUS
126:31657
Preparation of N-heterocyclecarbonyl amino acid hydroxyethylamino
sulfonamide as retroviral protease inhibitors
Getman, Daniel P., Bocrescenzo, Gary A., Freskos, John N., Vazquez,
Michael L., Sikorski, James A., Devadas, Balekudru, Nagarajan, Srinivasan,
Brown, David L., Mcdonald, Joseph J.
G.D. Searle and Co., USA
PCT Int. Appl., 184 pp.
CODEN: PIXXD2
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L4 ANSWER 15 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

Selected heterocyclecarbonyl amino acid hydroxyethylamino sulfonamide compds. of formula [I; R] = Cl-5 alkyl, C2-5 alkenyl or alkynyl, Cl-3 hydroxyalkyl, Cl-3 alkoxy.c1-3 alkyl, cyano-Cl-3 alkyl, cindacolylamethyl, CH2CONH2, CH2CH2CONH2, CH2CH2CONH2, CH2CH2CONH2, CH2CH2CONH2, CH2CH2CONH2, CH2CH2CONH2, CH2CH2CONH2, CH2CH2CONH2, CH2CH2CONH2, CH2CH2CH2CH3, Cl-3 alkyl, alkylthio-Cl-3 alkyl, arylthio-Cl-3 alkyl, 3, to 6-membered cycloalkyl-Cl-3 alkyl, R4 = aryl, benzo-fused 5- to 6-membered heteroaryl or heterocyclyl, atc., R10 = H, Cl-3 hydroxyalkyl, alkoxy-Cl-3 alkyl, R12, R13 = H, CH, HOCHZCH2, Cl-3 hydroxyalkyl, alkoxy-Cl-3 alkyl, or R11 and R12 or R12 and R13 along with the C atoms to which they are attached represent a benzo radical optionally substituted with at least one H0 or Cl-3 alkoxy radical] are effective as retroviral protease inhibitors, and in particular as inhibitor of HHV protease, and for the treatment of AIDS. The present invention relates to such retroviral protease inhibitors and, more particularly, relates to selected novel compds., composition and method for inhibiting retroviral proteases, such as human immunodeficiency virus (HIV) protease, prophylactically preventing retroviral infection. Thus, tert-leucine derivative (II, R = H)

Treparation
given) was condensed with Z-Pro-OH using 1-ethyl-3-(3-dimethylaminopropyl) carbodiinide hydrochloride and HOBt in DMF followed by hydrogenolysis and acidification with RCl to give proline-containing peptide analog II.HCl (R = H-Pro). The latter compound in vitro showed IC50 of 1 nM for inhibiting the proliferation of HIV-I in CEM cells.

RESS53-90-49 183553-91-59** 183553-92-69**
RI: RCl Reactant) SPN (Synthetic preparation) PREP (Preparation), RACT (Reactant) SPN (Synthetic preparation) PREP (Preparation), RACT (Reactant) SPN (Synthetic preparation) PREP (Preparation) Prophylamino) -2-hydroxy-1-(phenylaethyl)propyl)anino)-2-hydroxy-1-(phenylaethyl)propyl)anino)-1-((methylthio) methyl]-2-oxoethyl]-, 1,1-dimethylethyl ester (9CI) (CA

ANSWER 15 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

• HC1

L4 ANSWER 15 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN Absolute stereochemistry. (Continued)

183553-91-5 CAPLUS
Carbamic acid, [(1R)-2-[{(1S,2R)-3-{(1,3-benzodicxol-5-ylsulfonyl)(2-methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl]amino}-1-[(methylsulfonyl)methyl]-2-oxoethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

183553-92-6 CAPLUS
Propanamide, 2-amino-N-[(15,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl) (2-methylpropyl) amino)-2-hydroxy-1-(phenylmethyl)propyl]-3-(methylsulfonyl)-, monohydrochloride, (2R)- (9CI) (CA INDEX NAME)

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	Mi	chae:	L L.;	Sik	orsk	i, J	ames	A.,	Dev	adas	, E	Baleku	drus	Nag	araj	an,	Srin	ivas.	az
	Br	own,	Davi	d L.	, Mc	dona	ld,	Jose	ph J										
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	BR	9601	7638 T			À		1998	0526		BR	1996- 1996-	7638			1	9960	307	
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		2262				ĸ		2002	1115		AT	1996-	9071	35		1	9960	307	
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			-451			A3		1999	1201										
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Preparation of peptide hydroxyethylaminosulfonamide analogs as retroviral protease inhibitors.

ANSWER 16 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN 1996:748344 CAPLUS 126:19331

L4 ANSWER 16 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

Title compds. (I; n = 1, 2; Rl = alkyl, alkenyl, alkynyl, hydroxyalkyl, alkoxyalkyl, cyanoalkyl, imidazolylalkyl, CHZCOMHZ, CHZSOMe, etc.; R2 = alkyl, aralkyl, alkylthioalkyl, arylthioalkyl, cycloalkylakyl; R3 = alkyl, cycloalkylacyloxyalkyl, arylthioalkyl, cycloalkyl, cycloalkyl; R10 = H, alkyl, hydroxyalkyl, alkoxyalkyl; R11 = H, alkyl, hydroxyalkyl, R10 = H, alkyl, hydroxyalkyl, alkoxyalkyl; R11 = H, alkyl, hydroxyalkyl, alkoxyalkyl; R13, R13 = H, OH, alkoxy, 2-hydroxyethoxy, hydroxyalkyl, alkoxyalkyl; R13, R13 = H, OH, alkoxy, 2-hydroxyethoxy, hydroxyalkyl, alkoxyalkyl; R13, R13R1 = atoms to form 5-6 membered heteroaryl or benzo rings), were prepared Thus, title compound (II), ared

pared
by solution phase means, inhibited HIV protease with ICSO = 2 nM.
183553-89-17 183612-50-27
RL: BAC (Biological activity or effector, except adverse); BSU (Biological
study, unclassified); SFN (Synthetic preparation); THU (Therapeutic use);
BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of amino acid hydroxyethylaminosulfonamide retroviral
easse

(preparation of amino acid hydroxyethylaminosulfonamide retroviral protease
inhibitors)

NN 183553-89-1 CAPLUS
CN 1-Pyrrolidineacetamide, N-[(1R)-2-[[(1s,2R)-3-[(1,3-benzodioxol-5-ylsulfony)](2-methylpropy)]amino]-2-hydroxy-1-(phenylmethyl)propy)]amino]-1-[(methylsulfonyl)methyl)-2-oxoethyl]-, monohydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L4 ANSWER 16 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

183553-91-5 CAPLUS Carbamic acid, [(1R)-2-[{(1S,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl)amino]-1-[(methylsulfonyl)methyl]-2-oxoethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Absolute stereochemistry.

183553-93-7 CAPLUS
Propanamide, N-[(15,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl]-2-

L4 ANSWER 16 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

• HCl

183812-50-2 CAPLUS
1-Pyrrolidineacetamide, N-[(1R)-2-[([1S,2R]-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl)amino]-1-[(methylsulfonyl)methyl]-2-oxoethyl]- (9CI) (CA INDEX NAME)

183553-90-4P 183553-91-5P 183553-92-6P
183553-93-7P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of amino acid hydroxyethylaminosulfonamide retroviral

(preparation of amino acid hydroxyethylaminosulfonamide retroviral protease
inhibitors)
RN 183553-90-4 CAPLUS
CN Carbamic acid, [(1R)-2-[[(15,2R)-3-((1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl)amino]-1[[methylthio]methyl]-2-oxoethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

ANSWER 16 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued) [(chloroacetyl)amino]-3-(methylsulfonyl)-, (2R)- (9CI) (CA INDEX NAME)

10/677,729 Page 37

ANSWER 17 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN 1996:733943 CAPLUS 126:8710

DN TI Preparation of bisamino acid hydroxyethylaminosulfonamide retroviral

Preparation of olsamino acid hydroxyethylaminosulfonamide retroviral protease inhibitors.

Getman, Daniel P.; Descrescenzo, Gary A.; Freskos, John N.; Vasquez, Michael L.; Sikorski, James A.; Devades, Belekudru; Nagarajan, Srinivasan; Brown, David L.; Mcdonald, Joseph J.

G.D. Searle and Co., USA
PCT Int. Appl., 255 pp.

CODEN: PIXXD2 IN

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	NO	9704	149			A		1997	1105		NO	1997-	4149			1	9970	909
	US	4376 9704 6143	788			A		2000	1107		US	1998-	9130	96		1	9980	121
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os						-		0										

ANSWER 17 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

183553-92-6 CAPLUS
Propanamide, 2-amino-N-[(1s,2m)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)amino|-2-hydroxy-1-(phenylmethyl)propyl]-3-(methylsulfonyl)-,monohydrochloride, (2m)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

• HC1

183553-93-7 CAPLUS
Propanamide, N-([15,2R]-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)anino)-2-hydroxy-1-(phenylmethyl)propyl]-2[(chloroacetyl)amino)-3-(methylsulfonyl)-, (2R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L4 ANSWER 17 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN

RIBRIZNCRIORNICONHCHRICONHCHRZCH(OH) CHZNR3SOZR4 (RI = alkyl, alkenyl, alkynyl, hydroxyalkyl, alkoxyalkyl, CHZCHZCONHZ, CMeZSMe, etc., RZ = alkyl, aralkyl, elkylthioalkyl, arylthioalkyl, cycloalkyl, elkylthioalkyl, arylthioalkyl, cycloalkyl, RB = alkyl, eycloalkyl, cycloalkyl, cycloalkyl, klercorayl, heterocyclyl, benzoheteroaryl, RIO = H, alkyl, hydroxyalkyl, alkoxyalkyl, aralkyl, heteroaralkyl, alkylthioalkyl, etc., RIZ, RI3 = H, alkyl, aralkyl, heteroaralkyl, alkylthioalkyl, etc., RIZ, RI3 = H, alkyl, aralkyl, beteroaralkyl, cycloalkyl, cycloalkyl, cycloalkyl, hydroxyalkyl, alkoxyalkyl, aryl, heteroaryl; with provisos), were prepared as retroviral protease inhibitors. Thus, title compound (I), prepared by solution phase methods, inhibited HIV protease

with

IC50 = 1 nM. 183553-90-4P 183553-91-5P 183553-92-6P 183553-93-7P IT

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Absolute stereochemistry.

18353-91-5 CAPLUS
Carbamic acid, [(1R)-2-[[(1S,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl)amino]-1-[(nethylsulfonyl)methyl]-2-oxoethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

ANSWER 18 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN 1996:667025 CAPLUS 125:328302 L4 AN DN TI

125:328302

Preparation of N-[([sulfonylalkanoyl)amino]hydroxyalkyl]sulfonamides as retroviral protease inhibitors
Getaan, Daniel P.; Decrescenzo, Gary A.; Freskos, John N.; Vazquez, Michael L.; Sikorski, James A.; Devadas, Balekudru; Nagarajan, Srinivasan; HcDonald, Joseph J.
G.D. Searle and Co., USA
PCT Int. Appl., 171 pp.
CODEN: PIXXD2
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				SI															
		RW:						UG,											GR,
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	US	5705	500			λ		1998	0106		US	19	95-	4786	25		1	9950	607
		9666									ΑU	19	96-	6695	1		1	9960	307
	ΑU	7110	98			В2		1999	1007										
	EP	9135 9135	19			A1		1997	1229		ΕP	19	96-	9112	29		1	9960	307
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		3103						2001											
	US	5985	B 70			Ã		1999			us	19	97-	9130	69 49		11	9971	219
	US	5985 6380	188			B1		2002			US	20	00-	6724	49		2	0000	929
	GR	3036	254			T3		2001			GR	20	01-	(011	03		2	0010	724
	US	2003	1911	66		A1		2003	1009		US	20	02-	3212	3		2	0020	
	US	6667	307			B2		2003	1223								_		
	US	2004	1477	58		A1		2004	0729		US	20	03-	6777	29		2	0031	003
PRAI	US	1995	-401	838		A2		1995	0310										
		1995		625		A2		1995											
	WO	1996	-US2	6B 2		¥		1996	1307										

US 1997-913069 US 1997-913069 US 1999-411374 US 2000-672449 US 2002-82123

L4 ANSWER 18 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

183004-72-0 CAPLUS Propanamide, N-[(15,2R)-3-[(2,3-dihydro-1,4-benzodioxin-6-y1)sulfonyl](2-methylpropyl)amino|-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-(methylsulfonyl)-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

ANSWER 18 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

183004-76-4 CAPLUS
Carbamic acid, [5-[[[(2R,3s)-2-hydroxy-3-[((2s)-2-methyl-3-(methylsulfonyl)-1-oxopropyl)amino]-4-phenylbutyl](2-methylpropyl)amino]sulfonyl]-1H-benzimidazol-2-yl]-, methyl ester (9CI)(CA INDEX NAME)

Absolute stereochemistry.

183004-77-5 CAPLUS
Propanamide, N-[(15,2R)-3-[((2-amino-6-benzothiazoly1)sulfony1](2-methylpropy1)amino]-2-hydroxy-1-(phenylmethyl)propy1]-2-methyl-3-(methylsulfony1)-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

183004-78-6 CAPLUS
Propanamide, N-[(15,2R)-3-[(5-benzothiazolylsulfonyl) (2-methylpropyl) amino] -2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-(methylsulfonyl)-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L4 ANSWER 18 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN

183004-73-1 CAPLUS
Propanamide, N-[(15,2R)-3-[(6-benzothiazolylsulfonyl)(2-methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-(methylsulfonyl)-, (25)- (9Cl) (CA INDEX NAME)

Absolute stereochemistry,

183004-74-2 CAPLUS
Propanamide, N-[(15,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)amino|-2-bydroxy-1-(phenylmethyl)propyl]-2-methyl-3-[(R)-methylsulfinyl]-, (2S)- (9CI) (CA INDEX NAME)

183004-75-3 CAPLUS
Propanamide, N-[(15,2R)-3-[([2,3-dihydro-5-benzofuranyl)sulfonyl](2-methylropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-(methylsulfonyl)-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L4 ANSWER 18 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

183182-29-8 CAPLUS
Propanamide, N-{ (15,2R)-3-{ (1,3-benzodioxol-5-ylsulfonyl) (2-methylpropyl) amino|-2-hydroxy-1-(phenylmethyl) propyl]-2-methyl-3-{ (S)-methylsulfinyl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

183004-99-1P 183005-01-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagant) (PREP (Preparation); RACT (Reactant or reagant) (PREP (Preparation of N-[[sulfonylalkanoyl)amino]hydroxyalkyl]sulfonamides as retroviral protease inhibitors)
B13004-99-1 CAPLUS
Ethanethioic acid, S-[(25)-3-[[(15,2R)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl]amino]-2-methyl-3-oxopropyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

183005-01-8 CAPLUS
Propenamide, N={[15,2R]-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)amino|-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-(methylthio)-, (2S)- (9CI) (CA INDEX NAME)

L4 ANSWER 18 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

L4 ANSWER 19 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN (Continued) Propanamide, N-[(15,28)-3-[(1,3-benzodioxol-5-ylsulfonyl)(2-methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl]-2-methyl-3-(methylsulfonyl)-, (25)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

10/677,729 Page 40

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L5	79	SEA	FILE=CAPLUS ABB=ON	PLU=ON	"GETMAN DANIEL P"/AU
L6	57	SEA	FILE=CAPLUS ABB=ON	PLU=ON	"DECRESCENZO GARY A"/AU
L7	69	SEA	FILE=CAPLUS ABB=ON	PLU=ON	"FRESKOS JOHN N"/AU
L8	172	SEA	FILE=CAPLUS ABB=ON	PLU=ON	"SIKORSKI JAMES A"/AU
L9	67	SEA	FILE=CAPLUS ABB=ON	PLU=ON	"DEVADAS BALEKUDRU"/AU
L10	6	SEA	FILE=CAPLUS ABB=ON	PLU=ON	"NAGARAJAN SRINIVASAN RAJ"/AU
L11	50	SEA	FILE=CAPLUS ABB=ON	PLU=ON	"MCDONALD JOSEPH J"/AU
L12	47	SEA	FILE=CAPLUS ABB=ON	PLU=ON	"VAZQUEZ MICHAEL L"/AU
L13	322	SEA	FILE=CAPLUS ABB=ON	PLU=ON	L5 OR L6 OR L7 OR L8 OR L9 OR
		L10	OR L11 OR L12		
L14	40	SEA	FILE=CAPLUS ABB=ON	PLU=ON	L13 AND RETROVIR?
L15	8	SEA	FILE=CAPLUS ABB=ON	PLU=ON	L14 AND SULFONYLALKANOYLAMINO

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L15 ANSWER 1 OF 8 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

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L15 ANSWER 1 OF 8 CAPLUS COPYRIGHT 2005 ACS on STN AN 2001:10084 CAPLUS DN 134:71903
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           134:71903
Preparation of sulfonylalkanoylamino hydroxysthylamino sulfonamide retroviral protease inhibitors
Getman, Daniel P.; Decrescenzo, Gary A.; Freskos, John E.; Varquez, Michael L.; Sikorski, James A.;
Devadas, Balekudru; Nagarajan, Srinivasan; McDonald, Joseph
            J.
G.D. Searle and Co., USA
U.S., 62 pp., Cont.-in-part of U.S. Ser. No. 401,838, abandoned.
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US 6380188
US 2003191166
US 6667307
US 2004147759
PRAI US 1995-401838
WO 1996-US2682
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US 2000-672449
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                                                                        19991004
             US 2002-82123
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            MARPAT 134:71903
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Sulfonylalkanoylamino hydroxyethylamino sulfonamide compds.

R53(0) t(CH2) nCHRICONECHR2CH(CH3) CH2NR3502R4 (R1 = H, alkyl, alkenyl, alkynyl, hydroxyalkyl, alkonyalkyl, cyanoalkyl, CH2CONH2, CH2CH2CONH2, CH2SCH2, CH2SCH6, CH2SCME, CH2SCOME, 2 = alkyl, aralkyl, alkylthioalkyl, arylthioalkyl, cycloalkylalkyl, R3 = alkyl, cycloalkyl, cycloalkylathyl; R4 = benzo-fused heteroaryl or heterocyclyl; R5 = alkyl, alkenyl, alkynyl, aryl; t = 0-2) were prepared as retroviral protease inhibitors.

Thus, N-[2R-hydroxy-3-({2-methylpropyl}](1,3-benzodioxol-5-yl) sulfonyl] amino)-15-(phenylmethyl) propyl]-25-methyl-3-(methylsulfonyl) propanamide was prepared and assayed for HIV protease inhibitory activity (1c50 = 2 nt; Ec50 = 20 nt). The corresponding methylsulfinyl derivative I (claimed compound) showed 1c50 values 2 and 7 and

EC50 values 52 and 80 nm for the two isomers.

YT 59 THERE ARE 59 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

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L15 ANSWER 2 OF 8 CAPLUS COPYRIGHT 2005 ACS on STN AN 1999:733035 CAPLUS DN 131:337352
131:337352
Preparation of sulfonylalkanoylamino hydroxysthylamino sulfonamide retroviral protease inhibitors
Getman, Daniel P., DeCrescenzo, Gary A., Freskos, John S., Varquez, Michael L., Sikorski, James A., Devadas, Balekudru, Nagarajan, Srinivasan, McDonald, Joseph
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Sulfonylalkanoylamino hydroxyethylamino sulfonamide compds.

RSS (O) E (CH2) ncHNICONHCHRCEC((OH) CH2NRASO2R4 (RI = H, alkyl, alkenyl, alkynyl, bydroxyalkyl, alkoxyalkyl, cyanoalkyl, CH2CONH2, CH2CH2CONH2, CH2SO2NH2, CH2SO2NH2, CH2SO2NH2, CH2SO2NH2, CH2SO2NH2, CH2SO2NH2, CH2SO2NH3, rg = alkyl, aralkyl, alkylthioalkyl, srylthioalkyl, cycloalkylaethyl, R3 = alkyl, cycloalkylaethyl, r84 = benzo-fused beteroaryl or beterocyclyl n, t = 0-2) were prepared as retroviral protease inhibitors. Thus, N-[2R-hydroxy-3-[(2-methylpropyl)[(1,3-benzodioxol-5-yl)sulfonyllamino]-15-(phenylmethyl)propyl]-25-methyl-3-(methylsulfonyl)propynamide (I) was prepared and assayed for HIV protease inhibitory scrivity (ICSO = 2 nH) ECSO = 2 nH). ECSO = 2 THERS ARE 62 CITED REFERENCES AVAILABLE FOR THIS RECORD THERE ARE 62 CITED REFERENCES AVAILABLE FOR THIS RECORD

L15 ANSWER 2 OF θ CAPLUS COPYRIGHT 2005 ACS on STN ALL CITATIONS AVAILABLE IN THE RE FORMAT (Continued)

Page 42 10/677,729

L15 ANSWER 4 OF 8 CAPLUS COPYRIGHT 2005 ACS on STN AN 1998:324825 CAPLUS

129:16390

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L15 ANSWER 3 OF 8 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1998:392089 CAPLUS
D1 129:40987
TI Gulfonylalkanoylamino hydroxyethylamino sulfonyl urea
derivatives useful as retroviral protease inhibitors
IN Varquer, Michael L., Hueller, Richard A., Telley, John J.,
Getman, Dantel F., Decrescenzo, Gary A., Sun, Eric T.
PA G.D. Searle and Co., USA
OU.S., 29 pp., Cont. of U. S. Ser. No. 969,616, abandoned.
CODEN: USXXAM
DT Patent
LA English
PAN.CNT 1
PATENT NO. KIND DATE APPLICATION NO. DATE

PI US 5756498 A 19980526 US 1996-589563 19960111
PATENT US 1992-969616 B1 19921030
OS MARPAT 129:40987
AB Sulfonylalkanoylamino hydroxyethylamino sulfonyl urea derivs.
RSOX (CH2) CCX2021CHRIC (TY) NRGCHR2CH (OH) CH2NR3SONNR4CR7R7' (CH2) nRR R=
alkyl, alkenyl, alkynyl, cycloalkyl, etc., Rl R20, R21 = H, CH2S02NR2,
CH2CO2Me, halcalkyl, etc., R2 = alkyl, aryl, cycloalkyl, etc., R3 = alkyl,
haloalkyl, alkenyl, alkynyl, etc., R4 = H, radicals as defined for R3; R6
- H, alkyl, R7, R7' = H, amino acid side chains, etc.; R8 = cyano, OH,
alkyl, alkenyl, etc.; x = 1, 2; t = 0-2; n = 0-6; Y = S, S, NR15),
effective as retroviral protease inhibitors, and in particular
as inhibitors of HIV protease (no data), were prepared E.g..
N-[[[2R-hydroxy-3S-[[2S-methyl-3-(anchylsulfonyl)-1-cxopropyl] amino]-4-
phenylbutyl] (3-methylbutyl) amino] sulfonyl]-2-methylalanine Et ester was
prepared
RE.CNT 51 THERE ARE 51 CITED REFERENCES AVAILABLE FOR THIS RECORD
                                                                                                                                                               THERE ARE 51 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT
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ANSWER 5 OF 8 CAPLUS COPYRIGHT 2005 ACS on STN 1998:41716 CAPLUS 128:115228 Preparation of sulfonylalkanoylamino hydroxyethylamino sulfonamide retroviral protease inhibitors Getman, Daniel P., Decrascenzo, Gery A.; Freskos, John H.; Varquez, Michael L.; Sitorski, James A.; Devadas, Balekudru; Nagarajan, Srinivasan; Mcdonald, Joseph J.
   J.
PA G.D. Searle and Co., USA
SO U.S., 57 pp., Cont.-in-part of U.S. Ser. No. 401,838, abandoned.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 4
PATENT NO. KIND DATE APPLICATION NO. DAT
```

```
129:16390
Preparation of substituted sulfonylalkanoylamino hydroxyethylamino sulfonamide retroviral protease inhibitors Sitorski, James A., Oetnan, Daniel P., Decrescento, Gary A., Devedas, Balekudru; Freskos, John S., Lu, Ekvang-fun, McDonald, Joseph J. G.D. Searle and Co., USA
U.S., 131 DEVECAN
COURSE USXXXM
          DT
LA
                                                                                                                                                                                                            A 19980519
                                                     PATENT NO.
PATENT NO. KIND DAID

PATENT NO. KIND DAID

FI US 5753660 A 19980519 US 1996-747357 19961113

PRAI US 1996-747357 19961113

OS HARPAT 129:16390

AB SUIFONYLABRANOPLAMINO hydrokyethylamino sulfonamides

R55(0)m(CH2) DAGKRIC(:W)NRICHR2CH(OH)CRIZNRISO2R4 (W = 0, S; m, n = 0, 1, or

2; R1 = H, alkyl, alkenyl, alkynyl, bydrokyalkyl, alkokyalkyl, cyanoalkyl,

NHIZCOCHZ, NHACOCHZCHZ, NH2SO2CHZ, PASCHZ, PASCHZ; R2 = alkyl,

aralkyl, alkylthioalkyl, arylthioalkyl, cycloalkylalkyl; R3 = alkyl,

cycloalkyl, cycloalkylalkyl; R4 = aryl, heterocyclyl, R5 = alkyl,

cycloalkyl, cycloalkylalkyl; R4 = aryl, heterocyclyl, R5 = heteroaryl, heterocyclyl) were prepared as retrowtral protease

inhibitors. Thus, N-[2R-Hydroxy-3-[(2-methylpropyl)](1,3-benzodioxo1-5-

yl)sulfonyl]amino]-15-(phenylmethyl)propyl)-25-methyl-3-[2-(2-

pyridyl)ethylsulfonyl)propanamide was prepared by alkylation of the

corresponding 3-mercaptopropanamide with 2-(2-chloroethyl)pyridine

hydrochloride, followed by 5-oxidation The product was assayed for HIV

protease inhibitory activity (IC50 = 3 mM, EC50 = 6 mM).

RE.CNT 43 THERE ARR 43 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT
                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DATE
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L15 ANSWER 5 OF 8 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)
methylpropyl) [(1,3-benzodioxol-5-yl) sulfonyl] amino] -15(phenylmethyl)-propyl]-25-methyl-3-(methylsulfonyl) propanamide was prepd.
and assayed for HIV protease inhibitory activity (IC50 = 2 nH; EC50 = 20

nM). RE.CNT 58 THERE ARE 50 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
ANSWER 6 OF 8 CAPLUS COPYRIGHT 2005 ACS on STN 1997:450087 CAPLUS 127:65754
             AN
DN
TI
                                    127:65/54
Preparation of N-[2-hydroxy-4-phenyl-3-(sulfonylalkanoylamino)
butyl|ary|sulfonamides and analogs as retroviral protease
inhibitors
Sktorski, James A., Getman, Daniel P.,
              IN
                                   Sitorski, James A.; German, Daniel P.;
Decrescento, Gary A.; Devades, Balekudru; Freskos,
John B.; Lu, Hvang-fun; Mcdonald, Joseph J.
G.D. Searle and Co., USA; Sikorski, James A.; Getman, Daniel P.;
Decrescento, Gary A.; Devadas, Balekudru; Freskos, John N.; Lu, Hvang-Fun;
Mcdonald, Joseph J.
PCT Int. Appl., 68 pp.
CODEN: PIXXD2
             PA
PAN.CNT 1

PATENT NO.

KIND DATE

APPLICATION NO.

DATE

PI WO 9718205

W: Al, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EB, ES, FI, GB, GE, HU, IL, IS, JP, XE, KG, XP, KR, KZ, LK, LR, LS, LT, LU, LY, HD, HG, MK, HM, HW, HK, MO, NZ, PL, PT, NO, RU, SD, SE, SG, SI, SK, TI, TK, TR, TT, UA, UG, US, UZ, VN, AM, AZ, BY, KG, KZ, HD, RU, TJ, TM

RW: KE, LS, HW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, HC, ML, PT, SE, BF, BJ, CF, CG, CT, CM, GA, GM, HL, HR, NE, SN, TD, TG

CA 2236236

AN 9677222

AN 19970502

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, FT, IE, FI JP 2000515488

TZ 2000151688

TZ 2000151689

FO 1996-US17771

OS MARPAT 127:65754
            SO
```

AB R5SOt(CH2) nC(:W) NHCHR2CH(OH) CH2NR3SO2R4 [1; R1 = H, (un) substituted alkyl, alkenyl, etc.; R2 = (ar) alkyl, alkylthioslkyl, arylthioslkyl, etc.; R3 = (cyclo) alkyl, cycloslkylalkyl, etc.; R5 = heterocycly(lalkyl), (heterol aryl(alkyl), etc.; W = 0 or S; n,t = 0-2] were prepared Thus, (2R, 35) -PhcH2O2CHHCH(CH2Ph) CH(OH) CH2NHCH2CHH2C (preparation given) was amidated by (S)-AcSCH2CHMeCO2H to give, after deprotection, sulfonamide II (R = SH). The latter was S-alkylated by 2-(2-chloroethyl) pyridine (preparation)

L15	ANSWER 7 OF 8 CAP	LUS CO	PYRIGHT 2005	ACS on STN						
AN	1996:380218 CAPLUS									
DN	125:142289	_								
TI	Sulfonylalkanoylamino hydroxyethylamino sulfonamides useful as									
	retroviral proteas	e inhih	itors							
IN				A.; Talley, John J.;						
	Getman, Daniel; De									
PA	G. D. Searle and C									
50										
	CODEN: USXXAM	pu	01 0.0.	No. 353,071, ubando	neu.					
DT	Patent									
LA	English									
FAN.	CNT 2									
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE					
PΙ	US 5521219	A	19960528	US 1993-110913	19930824					
	AT 161828	E	19980115	AT 1993-920214	19930824					
	ES 2112430	T3	19980401	ES 1993-920214	19930824					
	FI 9500651	A	19950214	FI 1995-651	19950214					
	US 5508294	A	19960416	US 1995-455051	19950531					
	US 5510388	A	19960423	US 1995-455947	19950531					
	US 5639769	A	19970617	US 1996-587688	19960117					
	US 5760064	λ	19980602	US 1997-867430	19970606					
	US 5965588	Α	19991012	US 1998-48034	19980326					
	US 6147117	λ	20001114	US 1999-352215	19990713					
	US 6743929	B1	20040601	US 2000-655844	20000906					
	US 2004267022	A1	20041230	US 2004-750213	20040102					
PRAI	US 1992-935071	B2	19920825							
	US 1993-110913	A3	19930824							
	US 1996-587688	A1	19960117							
	US 1997-867430	A1	19970606							
	US 1998-48034	A1	19980326							
	US 1999-352215	A1	19990713							
	US 2000-655844	A3	20000906							
05	MARPAT 125:142289									
GI										

RSO2 (CH2) tCH2CHR1C(:Y)NHCHR2CH(OH)CH2NR3SO2R4 (R = alkyl, alkenyl, aryl, etc.: Rl = H, CHe2SHe, alkyl, haloalkyl, amino acid side chain, etc.: R2 = alkyl, aryl, cycloalkyl, etc.: R3 = H, alkyl, haloalkyl, alkenyl, etc.: R4 = alkyl, cycloalkyl, aryl, etc.: t = 0, l) Y = 0, S) and their salts were prepared as retroviral protease inhibitors. Thus, I was prepared in several attes and shown to have an ICSO of 3.2 nanomolar when tested against HIV protease.

L15 ANSWER 6 OF 8 CAPLUS COPYRIGHT 2005 ACS on STN (Continued) given) and the product oxidized to give II [R = 2-(2-pyridyl)ethylsulfonyl]. Data for biol. activity of I were given.

```
L15 ANSWER 8 OF 8 CAPLUS COPYRIGHT 2005 ACS on STN AN 1995:408388 CAPLUS UN 122:188162
DN 122:188162
TI preparation of sulfonylalkanoylamino hydroxyethylamino sulfamic acids as retroviral protease inhibitors
Vasquez, Michael L., Mueller, Richard A., Talley, John J., Getman, Dantel P., De Crescenzo, Gary A., Sun, Eric T.
PA G.D. Searle and Co., USA, Monsanto Co.
FCT Int. Appl., 111 pp.
COOEN: PIXXD2
DT Patent
LA English
FAN.CNT 1
PATENT NO.
                WO 9410136 A1 19940511 WO 1993-US10461 19931029
W: AT, AU, BB, BG, BR, BY, CA, CH, CZ, DE, DK, ES, FI, GB, HU, JF, KP, KR, KZ, LK, LU, LV, MG, MN, MY, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SK, UA, US, VN
RY: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG
CA 2143191 A1 19940511 A1 19940511 A1 19931029
RF 666643 A1 19950816 EP 1994-902199 19931029
RF 666643 B1 19990818
R: AT, BE, CH, DE, DK, ES, FR, GB, CR Y**
RF 885801
A2 PR 885801
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- * STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY AVAILABLE VIA OFFLINE PRINT *
- Sulfonylelkanoylemino hydroxyamino sulfamic acid compds. [I) R = alkyl, alkenyl, alkynyl, cycloalkyl, hydroxyalkyl, etc.; R1, R20, R21 = H, CH2-SO2-NH2, CH2-CO2-He, CO2He, CONH2, etc.; R2 = alkyl, aryl, cycloalkyl, cycloalkylalkyl, etc.; R3 = alkyl, haloalkyl, alkenyl, alkynyl, hydroxyalkyl, R4, R5 = H, any group in the definition of R3; R6 = H, alkyl; x = 1,2; t = 0, 1, 2; Y = 0, 5, NR15; R15 = H, any group in the definition of R3] and their pharmaceutically acceptable salts and esters,

10/677,729 Page 44

L15 ANSWER 8 OF 8 CAPLUS COPYRIGHT 2005 ACS on STN (Continued) effective as retroviral protease inhibitors, and in particular as inhibitors of HIV protease, are prepd. E.g., 2(5)-methyl-3-(methylsulfonyl)propionic acid was condensed with the phenylalanine deriv. II (prepn. given) in DMF contg. HOSt and 1-(3-dimethylaminopropyl)-3-ethylcarbodininde at 0° for 2 h and at room temp. for 16 h to give the title compd. III. III was the only title compd. prepd. with data and it was not tested for biol. activities, however, some intermediates, e.g., analogs of II, were tested for their HIV inhibition activity.

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